The Dissertation Committee for Lisa Margot Walker
Certifies that this is the approved version of the following dissertation:

Young Adolescents' Intention to Engage in Pre-sexual Activities

An Exploratory Study

Committee:

_____
Edward Anderson, Supervisor

_____
Fred Peterson

_____
Sue Greninger

_____
Jennifer Matjasko

_____
Nancy Hazen-Swan

Young Adolescents' Intention to Engage in Pre-sexual Activities

An Exploratory Study

by

Lisa Margot Walker, B.A.; MA

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Dedication

To my mom, Millicent Innis. I am everything because of you.
I love you mom

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Young Adolescents' Intention to Engage in Pre-sexual Activities

An Exploratory Study

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Lisa Margot Walker, Ph.D.

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Supervisor: Edward Anderson

Although adolescent pregnancy rates in the United States have decreased over the last decade or so, these rates remain higher than any other industrialized nation. This necessitates a better understanding of the factors implicated in adolescent sexual risk-taking. Many studies have examined the influence of attitudes, parents and peers on sexual behavior, these studies however, have not examined the impact of these factors on the behavioral intentions of adolescents younger than 12 years old. In order to address this gap, data collected from 142 students using the Young Adolescent Questionnaire was examined.

The overall objective was to examine attitudes, social norms and pubertal timing (for girls) on intentions to engage in a specific pre-sexual activity – kissing on the mouth with a boy/girl you really like within the next year. Modified constructs from the Theory of Reasoned Action and behavior patterns from The Typology of Young Adolescent Pre-

sexual Experience were measured by variables within the questionnaire. The theoretical construct of intention from the Theory of Reasoned Action was used to distinguish behavior patterns in the typology. Individuals were classified as delayers or anticipators depending on their intention to kiss or not to kiss on the mouth. Of the sample, 71.8% were anticipators and 28.2% were delayers. Another purpose of the study was to examine the impact of each predictor on behavioral intention status as well as to determine the strongest predictor.

MANOVA revealed that anticipators and delayers had different attitudes and peer norms. The barrier measure (reasons given by students for not kissing on the mouth), had a significant effect on behavioral intention status. Logistic regression revealed five predictors of behavior intention status – attitudes, parents' standards, peer norm, influencers (reasons given for kissing on the mouth) and previous experience, with influencers being the strongest predictor. Gender and ethnicity were not found to be significant predictors of behavioral intention status. However, gender did have a significant effect on peer norms and parents' standards. Girls who had experienced their first menstrual period were more likely to be classified as anticipators than girls who had not done so. This research was able to gain insight into the attitudes and social norms of young delayers and anticipators. Prevention programs incorporating the findings of this research will more effectively address the health needs of young adolescents.

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Chapter I

Introduction

Hill (1983) suggests that expressing sexual feelings and enjoying physical contact with others is one of the key developmental issues of adolescence. This developmental task carries with it a great deal of risks (Irwin, 1989). Because of the risks associated with adolescent sexual activity, early, effective intervention that alters either predisposing or precipitating factors may be the last opportunity to intervene before increased vulnerability to a range of devastating health, social, and economic consequences. The evidence is clear that adolescents are engaging in sexual activity at earlier ages and that these activities are accompanied by significant negative consequences such as unwanted pregnancies, STDs and other health related outcomes (Philliber & Carrera, 2003; U.S. Department of Health and Human Services, USDHHS, 2004). In order to identify and understand the factors associated with adolescent sexual activity future research should focus on young adolescents and those transitioning into adolescence. This study examines the theoretical as well as the empirical evidence regarding the roles of specific parental and peer factors, and pubertal timing (for girls) as it applies to pre-sexual behaviors (e.g., kissing on the mouth) in young adolescents (age 9 to 11). Due to the paucity of information available on the sexual behavior of young adolescents, findings from this study increase the understanding of young adolescents' pre-sexual behavior and enhance preventative measures.

The past four decades have been a period of great change in adolescent sexual activity and its consequences. While the incidence of teen pregnancy has declined, teen pregnancy and sexual activity still remains a significant problem (Child Trends, 2002). Almost nine hundred thousand adolescents become pregnant and three million new cases of sexually transmitted diseases (STDs) occur each year in persons aged less than 19 years (Allan Guttmacher Institute (AGI), 2004; Santelli, DiClemente, Miller & Kirby, 1999). Adolescents are also among the groups most at risk for HIV (United States Department of Health and Human Services (USDHHS), 2004). Of the nearly 40,000 new HIV infections that occur each year in the United States, half are in individuals younger than 25 years of age (Centers for Disease Control and Prevention (CDC), 2001). Because the average duration from HIV infection to the development of AIDS is 10 years, most adults with AIDS were likely infected as adolescents or young adults. HIV is the seventh leading cause of death among individuals ages 13 to 24 (CDC, 2001)

Adolescents are also initiating sexual activity at younger ages, thereby increasing the risks associated with adolescent sexual activity (Philliber & Carrera, 2003; Santelli, et al., 1999;, USDHHS, 2004). A critical risk factor for both adolescent pregnancy and STDs is early age at the initiation of sexual intercourse (Hofferth, 1987; Santelli, et al., 1999). Early initiation of sexual activity is associated with significant negative personal and public health outcomes. Delaying the initiation of sexual activity has important implications for all adolescents, particularly the youngest adolescents, as well as for society on a whole. The problems associated with adolescent sexual behavior have

therefore led the government to identify responsible sexual behavior as a priority for the nation (CDC, 2000). A goal has been set for the year 2010 to increase the proportion of adolescents who abstain from sexual intercourse or use condoms if currently sexually active (USDHHS), 2004).

Past research on adolescent sexual activity has focused on adolescents 12 years and older. These investigations focused on the rates of activity and the extent to which individual and contextual factors influenced the initiation of sexual intercourse. These studies have done much to explain the ways in which adolescent sexual behavior varies by different factors. The antecedents and correlates of the timing of first sexual intercourse encompass multiple domains: biological factors, such as the timing of puberty; psychosocial characteristics, such as personality and cognitive style; sociocultural factors, such as gender specific norms regarding the meaning of being sexually active, and family and peer influences. Family and peer factors have been found to be particularly influential on adolescent sexual behavior (Resnick, et al., 1997; Small & Luster, 1994).

Family characteristics that have been shown to influence, or be associated with, the initiation of early sexual activity include parental characteristics (family composition, economic status, ethnicity, education, level of violence/abuse, older siblings who are sexually active); parent-adolescent relationships (supervision, communication, connectedness, autonomy); and attitudes and values of family members (attitude towards sex, religion) (Miller, Cain, Rogers, Gripple, & Turner, 1998). Much of the research

investigating how family influences the onset of adolescent sexual behavior is based on the adolescent's perspective of family communication, beliefs and values. Adolescents typically delay the onset of sexual activity when they perceive that they have good family relationships as well as parental support and opportunities for achievement in school (Resnick, et al., 1997). While evidence suggests that parents retain a substantial degree of influence over the attitudes and behavior of their adolescents, peer pressure is still a significant factor in adolescence. Peers are particularly important during adolescence because they provide validation for the adolescent's tentative choices and support in stressful situations. This concern over peer influence is justified considering the findings that indicate that across the early years of adolescence susceptibility to peer pressure increases, while reliance upon parents' advice and opinions decline (Brendt, 1979).

Since the age of the initiation of sexual activity is decreasing (Philliber & Carrera, 2003; Santelli, et al., 1998; USDHHS, 1996) the age at which adolescents start thinking about and even planning for sexual involvement must also be decreasing. Studies are therefore needed to investigate those factors that may promote these early activities as well as those factors that discourage these behaviors.

There is evidence to suggest that certain behaviors are precursors to actual sexual activity. These behaviors will be referred to as pre-sexual activities. Pre-sexual activity is defined as actions that precede actual sexual activity such as sexual intercourse. These activities include, but are not limited to, (1) adolescents spending time alone with a boy or girl they like, (2) dating (unsupervised social outing), (3) kissing on the mouth, and (4) having a boyfriend or girlfriend.

Studies have shown that having a boyfriend or girlfriend increases the likelihood that older adolescents will engage in sexual activity (Bruckner & Bearman, 2003; Cooksey, Mott & Nuebauer, 2002; Manning & Giordano, 2001). In this study the assumption will be made that "having a boyfriend or girlfriend" and "kissing on the mouth with someone you really like" suggests the initiation of pre-sexual activities in young adolescents. This assumption is made because of the link that has been established between having a boyfriend/girlfriend and youth becoming sexually active (Bruckner & Bearman, 2003). Having a boyfriend/girlfriend, while socially acceptable, afford adolescents opportunities to engage in pre-sexual and sexual activities and may motivate them to become sexually active. Therefore, an adolescent who has a boyfriend or girlfriend is more likely to kiss on the mouth. The proposed study seeks to investigate some of these pre-sexual activities in order to provide a more complete picture of adolescent sexual behavior. While being sexually active may not be risky for all adolescents, for young adolescents it is particularly problematic due to the associated negative outcomes.

Adolescent sexual risk-taking is a public health concern. Consequently, it is important to explore all influences that may contribute to such behavior. Research has already identified many factors believed to play a role in general adolescent risk-taking behavior (Miller, 1998; Resnick, et al., 1997; Small & Luster, 1994). Interestingly however, a clear distinction has not been made with regards to the pathway specifically relating to adolescent sexual risk-taking. Additionally, relatively little information exists on the sexual behavior of young adolescents and those individuals transitioning into adolescence. This study will therefore be utilized to identify vulnerable young

adolescents who, when faced with a series of precipitating factors (e.g., peer initiation of pre-sexual activity, lack of parental monitoring) and limited experience in dealing with them (cognitive immaturity and lack of knowledge of the consequences of engaging in sexual activity), have a higher than usual interest in engaging in early pre-sexual behavior. The important point to note is that identifying these individuals early in life, before they actually reach full puberty (when sexual risk-taking is more likely) is highly beneficial. This allows parents, health educators, and others providing care and counseling, as well as those in policy development, to effectively address issues related to adolescents' sexual behavior in a timely manner.

Adolescent sexual risk-taking behaviors have been defined as behaviors including early initiation of sexual behavior, having multiple sex partners, and the failure to use contraceptive methods to protect against pregnancy and STDs (Cates, & Stone, 1992; Greenberg, Magder & Aral, 1992; Orr, Beiter & Ingersol, 1991). The emphasis in this study will be on the early initiation of pre-sexual behavior and the long-term implications. Earlier studies focused on the sexual behavior of older adolescents, dividing behavior into two categories: sexually active and not sexually active. This categorization, while significant, hides important behavioral intentions and sexual practices of adolescents (Miller, et al., 1997). The Typology of Young Adolescent Pre-sexual Experience, a modified version of Miller's (Miller, et al., 1997) Typology of Adolescent Heterosexual Experience will be presented as a way to categorize young adolescents' involvement in early pre-sexual behavior. This will allow for the presentation of categories identifying young adolescents who: may not yet be involved in pre-sexual

behaviors but who have the intention to do so; those who are already active; as well as those who intend to delay the initiation of sexual activity.

The present study also incorporates the Theory of Reasoned Action /Theory of Planned Behavior (Ajzen & Fishbein, 1980; Ajzen & Fishbein, 1977) as a framework for examining young adolescents' intention to engage in early pre-sexual activity. This theory holds that subjective norms and attitudes are the driving factors in behavioral decisions. The theory posits that a person's behavior is determined by their attitude towards the outcome of that behavior and the opinions of the person's social environment. Adolescents' attitudes are highly influenced by their social environment, particularly by their parents and peers (Miller, 1998; Resnick, et al., 1997; Small & Luster, 1994). The Theory of Reasoned Action/Theory of Planned Behavior is therefore well suited to investigate young adolescents' intentions to engage in pre-sexual behavior.

There are four objectives to this study. First, the theoretical and empirical evidence regarding the roles of parental and peer factors, as it applies to sexual activity in young adolescents, is examined. Secondly, the study identifies young adolescents who have a higher than usual interest in engaging in pre-sexual activity. The third objective is to identify the contextual factors exerting the strongest influence on young adolescents' intention to engage in pre-sexual activities. Lastly, the study provides a more complete picture of adolescent sexual behavior in general.

Statement of Problem

Adolescents are engaging in sexual activities at younger ages (Bingham & Crockett, 1996). Early and unprotected sexual intercourse among adolescents predisposes young people to health-related risks, especially sexually transmitted diseases and unplanned pregnancy. These issues remain a major problem in the United States. Most current prevention programs target adolescents 12 and older and typically categorize students into a sexually active group or a sexually inactive group. This traditional dichotomy hides important behavioral intentions of adolescents. Moreover, the focus on adolescents over the age of 12 excludes those younger adolescents who may be already sexually active or have intentions to become sexually active, as well as those who plan to delay the initiation of sexual activities. The timing of first sexual intercourse is of particular concern because those who begin having sex at early ages have more sexual partners, have more frequent intercourse, and are less likely to use contraceptives during adolescence and early adulthood (Hofferth, 1987; Philliber & Carrera, 2003; Santelli, et al., 1999).

Purpose of Study

This study incorporates The Typology of Young Adolescent Pre-sexual Experience and The Theory of Reasoned Action (Ajzen & Fishbein, 1980; Ajzen & Fishbein, 1977) to examine the pre-sexual behavior of young adolescents. The motivational forces and other factors affecting young adolescents' (age 9-11) decisions to initiate pre-sexual activities or to delay such activities are examined. The Typology of Young Adolescent

Pre-sexual Experience is used to look at behavioral intentions. Behavioral intentions are based on the responses young adolescents in the study provide to specific questions related to pre-sexual activity. Constructs from the Theory of Reasoned Action will provide the opportunity to utilize The Typology of Young Adolescent Pre-sexual Experience to observe if expected results are obtained. Specific factors such as parent factors, peer factors, gender, age, ethnicity, and pubertal status (for girls) will be examined in relation to the sexual behavior status of these young adolescents.

The first purpose of this study was to examine whether attitude and social norm measures differentiate between those young adolescents who anticipate pre-sexual activities (anticipators) and those who intend to delay these activities (delayers). The second purpose was to determine whether measures of attitudes and social norms predict intention to engage in pre-sexual behavior among anticipators and delayers and if so, to determine which was the stronger predictor of pre-sexual behavioral intention status. Thirdly, this study examined whether influencers and barriers differ by behavioral intention status. Ethnic and gender effects on intention status, attitudes, social norms, barriers/influencers, and previous experience was examined. Finally, this study also examined the influence of pubertal timing in girls (as identified by the onset of menstruation) for delayers and anticipators.

Research Questions

1. Can behavioral intention status (anticipator or delayer) be differentiated by attitude and social norm scores?

2. Do barrier scores and influencer scores differ by behavioral intention status?
3. Does previous pre-sexual experience differentiate intention status?
4. Which construct (attitudes, peer behavior, parents' standards, barriers, influencers or own behavior) is the best predictor of outcome (delayer or anticipator)?
5. Do ethnicity and gender affect intention status, attitude, social norm, barriers, influencers and previous experience for young adolescents 9 to 11 years old?
6. Does pubertal timing for girls predict who will be anticipators or delayers?

Rationale

There are both practical and theoretical reasons for conducting this study. From a practical perspective, understanding the factors that place adolescents at risk for early initiation of sexual activity and the ability to predict and understand motivational influences on behavior will provide information that is valuable in the development of pregnancy and STD prevention programs. On a theoretical level, this study will have a significant influence on the knowledge base regarding the characteristics of young adolescents and intentions of sexual behavior currently absent from the literature. Information gained from this study will go a long way in helping to complete the understanding of adolescent sexual risk-taking.

Delimitations

The study population was be limited to 142 young adolescents age 9 to 11 enrolled in an after school program.

Basic Assumptions

Several basic assumptions were made throughout the process of conducting this study. These assumptions are as follows:

1. Participants of the study understand the purpose of the study as well as the procedures of the survey.
2. Participants are aware of confidentiality.
3. Participants will answer each question honestly and to the best of their abilities.
4. The survey instrument to be administered is valid.

Limitations

There were several limitations inherent in this study. The findings, interpretations, and subsequent discussion derived from this study are considered with the knowledge of the limitations described below.

1. Due to the sensitive nature of some of the questions, some students may not be comfortable responding accurately. Rates of kissing on the mouth may therefore be difficult to establish because of response bias.

2. Due to the design of the survey instrument for this specific population, measures used to represent the constructs within the Theory of Reasoned Action may not function as recommended by Ajzen and Fishbein (1980).
3. The study used a subgroup of students who are in after-school care. These students may be different from the general population of students, age 9 to 11. This may limit the generalizability of the study.
4. Since the study did not ask questions related to current sexual behavior, some students who are currently sexually active might be categorized as anticipators, when in fact they are sexually active.
5. Data were collected to reflect the attitudes, and norms of students in a metropolitan area. This may not be representative of students of the same age range in other areas of the state or country.

Chapter II

Literature Review and Theory

This chapter reviews the literature on adolescent sexual behavior. The current body of knowledge on adolescent sexual behavior will be presented with attention to research on sexual risk-taking behavior of adolescents younger than 14 years old. The focus is on the role of parents and peers in adolescent sexual risk-taking. Based on the review of the literature and theoretical support, this study attempts to answer a number of questions on the influence of beliefs, attitudes and peer norms on adolescents' sexual behavior.

Adolescent sexual behavior will first be reviewed, looking specifically at levels and trends, followed by a discussion about the consequences of sexual risk-taking. This discussion will be followed by a review of the sexual activity of young adolescents, with attention paid to the early initiation of sexual activity (sexual involvement for adolescents under age 14) and associated factors. Two key factors associated with sexual risk-taking, parent and peer factors, will then be explored in depth, after which the focus will be on how the problem of adolescent sexual risk-taking can best be addressed. To conclude the chapter, Miller's Typology of Adolescent Sexual Experience and Ajzen and Fishbein's The Theory of Reasoned Action will be presented as a way of explaining and understanding sexual risk-taking in young adolescents.

Adolescent Sexual Behavior

Levels and Trends

In his comprehensive review of adolescent sexual behavior, Kirby suggests that sexual behavior among adolescents is not uncommon (Kirby, 2001). In the year 2000, 45% of students in grades 9-12 in the United States reported having had sexual intercourse (CDC, 2001). Among ninth graders, 34% reported they had sexual intercourse, and by tenth grade, 61% reported they had sexual intercourse (CDC, 2001). Approximately 7% of students had sexual intercourse for the first time before the age of 13 (CDC, 2001).

Differences in the level or occurrence of sexual activity were noted across race and ethnic lines and with regard to income levels. Levels of sexual activity among adolescent males are more strongly associated with race and ethnicity than with income level. In 1995, 80% of black men aged 15-19 reported having had sexual intercourse, compared with 61% of Hispanics and 50% of whites (Singh & Darroch, 1999). Among adolescent females similar patterns were observed, with more blacks having had sexual intercourse than Hispanics or whites. The differences however, were not as great as among adolescent men. Teenagers from Asian, Pacific Islander, and Alaskan native or Native American background, as well as foreign-born teenagers, were the least likely to have initiated intercourse (Singh & Darroch, 1999). In 1995 the CDC also found comparable figures with rates of sexual intercourse highest among blacks (60%), followed by Hispanics (48%) and whites (43%) (CDC, 2001). These figures reflected a trend

indicating a decrease in the numbers of students who have had sexual intercourse across all ethnic groups. The largest decrease was observed among blacks.

The relationship between the initiation of intercourse and race and ethnicity is much stronger than the association with income level. Poverty status is a strong predictor of the early onset of sexual activity among girls (Singh & Darroch, 1999). Among adolescent women, low-income teenagers are much more likely than adolescents from higher income families to be sexually experienced (Singh & Darroch, 1999). About 61% of adolescent women who live in families below 150% of the poverty level have ever had intercourse, compared to 49% of those in families where income is 150-299% of the poverty level and 47% of those at or above 300% of poverty (Singh & Darroch, 1999). Lower-income youth are slightly more likely to initiate sexual intercourse at earlier ages than middle or higher-income youth; these differences, however, are not large (Singh, Darroch & Frost, 2001). Among girls, 16% of those living in families below 150% of poverty had initiated intercourse by age 15, compared with 11% of girls from families at or above 300% of poverty (Singh, Darroch & Frost, 2001).

Adolescent Development

Adolescence has been described as a period of life beginning in biology and ending in society (Petersen, 1988). This phase of development may be defined as a time within the lifespan when most of a person's biological, cognitive, psychological and social characteristics change from child-like to adult-like (Lerner & Spanier, 1980). Adjustments are required to changes in the self, family and peer groups as well as

changes taking place in school, such as transition from elementary to middle school and from middle school to high school. The search for universal descriptors for all adolescents has been replaced by research looking at the wide variability that characterizes psychological development during this phase.

The onset of puberty marked by the development of breasts and first menstrual period for girls, the deepened voices and broad shoulders for boys, ushers in the period of adolescence. These physical changes, while undoubtedly profound, are but a fraction of the developmental processes adolescents experience (Archibald, Graber & Brooks-Gunn, 1999; Spear, 1996). Teenagers are also experiencing phenomenal changes in cognitive, emotional, moral and social development, providing unique opportunities for cultivating various attitudes and behaviors (Galotti, Kozberg & Farmer, 1991). The adolescent is therefore a complex individual and all facets must be examined in order to gain a full understanding of functioning. Any model of adolescent sexual risk-taking must incorporate all these factors in order to adequately address the issue.

While the period of sexual maturation takes place over a period of several years, it sometimes appears that adolescents' bodies change overnight. Although there is much variability in the age of onset of puberty and the rate of changes over time, there is also a significant level of predictability in the sequence of physical changes (Kipke, 1999). The onset and progression of puberty is affected by a number of factors, including genetic and biological influences, socioeconomic status, stressful life events, nutrition and diet, amount of body fat, as well as the presence of chronic illnesses.

The most observable changes of puberty emerge over an average of 4 years (Spear, 1996). The growth spurt, which involves rapid skeletal growth, usually begins at about ages 10 to 12 in girls and 12 to 14 in boys and is complete at around age 17 to 19 in girls and 20 in boys (Spear, 1996). For most adolescents, sexual maturation involves achieving fertility and the physical changes that support fertility. For girls, beginning breast development is one of the first signs of puberty. The onset of menstruation (menarche) occurs later in the pubertal sequence. Two earlier visible changes are the appearance of pubic hair and growth spurt; further development of both of these characteristics continues across the pubertal phase. For boys, the onset of puberty involves the enlargement of the testes, growth of the penis, as well as the appearance of pubertal hair. The development of secondary sexual characteristics such as body hair and voice changes, occur later in puberty (Archibald, Graber & Brooks-Gunn, 1999).There is therefore no magic age for the onset of puberty, but instead a period of years within which individuals may begin transition to this phase of development.

Puberty has been beginning earlier and earlier for at least the last century. For example, there has been a trend to an earlier menstruation of approximately 3 to 4 months per decade in Europe during the last 100 years (Firsch, 1983b). In the mid-nineteenth century, the average age at which girls reached menarche was approximately 15. The trend toward earlier menarche is now being documented in developed countries as well. Data reported on Britain during the 19th century on age specific fertility, the ages of reproductive events, and nutrition and growth show that undernourished males and females completed growth 4 to 5 years after their well-nourished contemporary males and

females (Firsch, 1983b, 1978). Over several generations, nutrition and health care have improved, resulting in people who are closer to their genetic potentials (Petersen, 1988; Spear, 2000). Thus, improved nutrition and more effective public health measures are reasons being cited for this trend in the early onset of puberty.

A recent study of 17,000 healthy girls ages 3 through 12 visiting pediatricians offices found that 6.7% of white girls and 27.2% of African American girls were showing some signs of puberty by age 7 (i.e. breast and/or pubic hair development) (Herman-Giddens et al., 1997). Results of this study suggest that the onset of puberty may be occurring at about one year earlier in white girls and two years earlier in African American girls than had previously been thought.

While the onset of menarche is still considered to be a significant indication of the tempo of maturation, researchers now view it as a late event in the pubertal process. Puberty may begin as early as 7 years of age with menarche following years later (Herman-Giddens et al., 1997). As children experience puberty and other developmental changes at earlier ages, evidence suggests that they are also engaging in sexual activities at earlier ages as well (Bingham & Crockett, 1996; O'Donnell, O'Donnell & Stueve, 2001).

Sexual Activity among Young Adolescents

While much is known about adolescent sexual activity in general, very little is known about the sexual behavior of young adolescents. Here, young adolescents are adolescents 11 and under. Irwin (1989) suggests that while sexual exploration is a normal part of

adolescent development, sexual intercourse may be potentially destructive for adolescents due to their limited experience and lack of understanding of the accompanying consequences. This is even more the case for young adolescents due to cognitive immaturity and extremely limited experience, as well as the potential for a longer period of exposure to risk-taking behavior and accompanying consequences (Bruckner & Bearman, 2003). Because of these factors, sexual activity is considered more risky for young adolescents than for older adolescents.

A greater proportion of adolescent females are currently sexually active than in previous decades and the age of first intercourse is dropping (Bingham & Crockett, 1996). While the proportion of adolescent girls age 15-19 who had initiated sexual intercourse decreased between 1988 and 1995, the proportion of adolescent girls who had initiated sexual intercourse at age 14 or younger increased significantly during the same period of time. This decrease in the age of first sexual experience is of great concern due to the risks associated with early sexual activity.

Youth who have sex at an early age appear to be different from those who have not, both in their sexual behavior and other areas as well (Bruckner & Bearman, 2003). For example, sexually experienced adolescents are more likely to engage in other risky behaviors (Boyer, Tschann & Shafer, 1992; Capaldi, Crosby & Stoolmiller, 1996; Millstein, et al.,1992). Sexually experienced youth younger than 14 are much more likely than their peers who have not had sex to use drugs and alcohol, and to engage in delinquent behavior (Bruckner & Bearman, 2003; Philliber & Carrera, 2003).

Early first sexual experiences for girls are also more likely unwanted when compared to girls who have sex at age 15 or older (Flanigan, 2003; Moore, Driscoll & Lindberg, 1998). Flanigan (2003) also found that these first sexual relationships end more quickly, creating the opportunity for relationships with new partners. This is problematic over the long term, since girls who begin having sex at 14 or younger will likely have more sexual partners and are therefore placed at increased risk for contracting STDs, unwanted pregnancies and dropping out of school (Kirby, 1997). Early sexual activity may not cause all these problems, but it should be considered an important warning sign of being at risk for these potential outcomes.

The literature suggests that adolescents who begin sexual activities early in life are faced with a number of negative outcomes. In addition to the possibility of unwanted pregnancy and STDs, these adolescents frequently have poorer health later in life (increased risks of cervical cancer, pelvic inflammatory disease, and compromised future fertility), lower educational attainment and economic productivity than their peers who begin sexual activity later (Harvey & Spigner, 1995; Hays, 1987; Lammers, Ireland, Resnick & Blum, 2000; Mott & Hurin, 1988). Medical evidence also suggests that younger adolescent females who are sexually experienced are at greater risks of contracting HIV (the virus that causes AIDS) (USDHHS, 2004). This is in part due to the immaturity of the lining of the cervical canal and its susceptibility to damage due to sexual intercourse in early adolescence (before full maturity is achieved).

Consequences of Adolescent Sexual Activity

Almost five in ten girls become pregnant at least once before they reach 20 years of age and many of these girls become pregnant again before age 20 (CDC, 2001; National Campaign to Prevent Teen Pregnancy, 2001). The result is approximately eight hundred and forty-one thousand teenage pregnancies in the U.S. each year (AGI, 2004), at a cost of some $7 billion per year (Annie E. Casey Foundation, 1998). Unfortunately, when adolescents give birth, their future and that of their children is often compromised. They are less likely to finish school and are more likely to be long-term single parents (Maynard, 1997). In addition, the offspring of teenage mothers, particularly young teenage mothers, have poorer physical health and lower cognitive development as well as higher rates of behavior problems and overall worse educational outcomes (Maynard, 1997). Children of teenage mothers are also more likely to become teen mothers themselves compared to children born to mothers even 3-6 years older (Maynard, 1997).

While the United States' rate of teenage pregnancy has declined significantly over the years, among industrialized nations the United States still has the highest rate of teenage pregnancy (AGI, 2004). The United States has a rate of 84 pregnancies per 1000 girls aged 13-19 (AGI, 2004). AGI (2004) reports that this figure is approximately twice the rate of Canada (49 per 1000) and England (55 per 1000), four times as high as France (23 per 1000) and almost seven times as high as Spain, Italy and the Netherlands (14 per 1000) (Flanigan, 2001; Singh & Darroch, 2000). Any disparity disappears after controlling for ethnicity and poverty (Kirby, 1999).

The negative effects of early parenthood have been extensively documented. Education, health and future employment are significantly compromised; adolescents who become parents are significantly more likely to live in poverty (Brooks-Gunn, Guo & Furstenberg, 1993; Fergusson & Woodward, 1999). There has been concern that the younger individuals are at the time of first sexual intercourse, the less likely they are to use any form of contraception (Bruckner & Bearmann, 2003; Goodwin, 1990; Pleck, 1989; Pleck, Sonenstein & Ku, 1991); to the extent this is true, the result is be greater exposure to the risk of unintended pregnancy and sexually transmitted diseases. Research has, in fact, validated this concern. The likelihood of contraception use during an adolescent's first sexual intercourse increases dramatically as age at first sex increases (Bruckner & Bearman, 2003). Among young adolescents who are sexually experienced, only 57% reported using contraception the first time they had sex. For 12 year olds, however, only 29% did so. Contraceptive use increased between age 13 and 14 for boys (from 50% to 65%), but there was no significant increase for girls in this same age group. These figures suggest that girls younger than 14 years old, who are sexually active, are at greater risk of unintended pregnancies and STDs due partly to their limited use of contraception. (Terry-Humen & Manlove, 2003)

While most sexually experienced teenagers use contraception at least part of the time, many do not. Fifty-seven percent of 15-19 year olds reported using condoms the last time they had sex (CDC, 2001). Blacks were the most likely to use contraception at their most recent act of sex, while whites and Hispanics are almost equally likely. Other reports indicate that Hispanics are the least likely to use contraception during their most recent

sexual act, with whites and blacks fairing equally (Kirby, 2001). These differences in findings suggest that a closer look needs to be taken at adolescent use of contraception.

Although pregnancies are rare among 12-14 year-olds, girls who are having sexual intercourse are at substantial risk for pregnancy partly due to cognitive immaturity, the limited use of contraception, and low awareness of risk (American School Health Association (ASHA), 1996; Bruckner & Bearman, 2003; Chilman, 1990). Some argue that many adolescents do not have the cognitive maturity to translate knowledge about risks into action or to anticipate the consequences of risky sexual behavior. Teens at this stage live much more in the moment than do older teens or adults. They are often less likely than older adolescents to connect the actual act of intercourse with the real possibility of having a baby nine months later. This inability to perceive future consequences of current behavior is a manifestation of cognitive immaturity. Additionally, the sense of invincibility that often characterizes adolescent behavior may result in underestimation of risk. The result is that studies have found between 13% and 15% of sexually experienced 14-year-old girls (about one in seven), reported having been pregnant (Flanigan, 2003; Terry-Humen & Manlove, 2003).

Adolescent sexual activity also leads to high rates of sexually transmitted diseases (STDs). Every day, 8,000 teenagers in the United States become infected by a sexually transmitted disease (AGI, 2004). This year, nearly 3 million teens will become infected. Overall, roughly one-quarter of the nation's sexually active teens have been infected by a STD (CDC, 2001). Each year in the U.S. one quarter of the estimated 12 million new cases of STDs, other than HIV, occur among teenagers 15-19 years old (CDC, 2001;

AGI, 2001). Among women with newly diagnosed HIV infection, 25% are aged 13-24 (CDC, 2001).

The rates and trends of sexual activity vary based on ethnicity, but overall the outcome remains the same: adolescents who become sexually active are at greater risk for unwanted pregnancy and STDs than adolescents who do not. Younger adolescent girls are the most vulnerable due their low level of maturity and the long lasting consequences of early sexual involvement.

Factors associated with the early initiation of sexual activity

Studies have investigated the factors thought to be associated with early initiation of sexual intercourse. Becoming sexually active early in life seems related to certain environmental and familial characteristics (Udry & Billy, 1988; Miller, 1998; Resnick, et al., 1997; Small & Luster, 1994). The literature identifies a number of key factors that have been associated with risky sexual behaviors: race and ethnicity; socioeconomic status; social influences; attitudes toward contraception, condoms and pregnancy, and safer-sex behavioral skills. Table 1 provides a list of factors found to be associated with adolescent sexual behavior. Differences by race and ethnicity vary across risk behaviors. Black teenagers, for example, are more likely to have early vaginal sex than Hispanics, who are more likely to do so than whites (Bearman & Bruckner, 2001). These differences are related to multiple individual, social and environmental influences. Social factors, specifically parental and peer factors will be examined more closely in this review.

Table 1
Antecedents of Initiation of Sex

	Risk Factor	Reference
Biological	Older pubertal development and timing	Benson & Torpy, 1995
	Being male vs. female	Udry, 1988
	Physical maturity- appears older than others	Capaldi, Crosby, & Stoolmiller, 1996; Billy, Brewster, & Brady, 1994
Social & Family	Peers – Suicidal ideations	Benson & Torpy, 1995
	High crime rate	Bill, Brewster, & Grady, 1994
	Lack of active involvement in religious practices	Brewster, Cooksey, et al., 1998
	Ethnicity	Inazu & Fox, 1980
	Low educational performance	Ohannessian & Crockett, 1993
	Delinquency; drug use	Rosenbaum & Kandel, 1990
	Peer relationship – engaging in physical fights	Harvey & Spigner, 1995
	Single mother headed household	Meschke, et al., 2000
	Having older sibling	
	Sexually active peers	Lock & Vincent, 1995
Attitudes	Permissive attitudes towards premarital sex and abstinence	Gibson & Kempf, 1990 Small & Luster, 1994

Parental and Peer Factors: Influence on Adolescent Sexual Behavior

The reasons for the differences in sexual behavior between young and older adolescents are not fully known. Two important influences on adolescent sexual behavior are family factors (East, 1996; Inazu & Fox, 1986; Jessor and Jessor, 1975; Miller et al., 1998; Moore et al., 1986; Newcomer & Udry, 1984, 1985; Whitaker, Miller & Clark, 2000) and peer factors (Kinsman, et al., 1997; Perkins, et al., 1998) These factors have been identified as instrumental in the development of beliefs and attitudes in adolescents.

A review of these factors is important in shedding light on what is currently understood about adolescent sexual behavior as well as to lay the foundation for exploring the influences of pre-sexual behavior in young adolescents.

Parental Factors

The role of the family in adolescent development has been researched for over 60 years (Miller et al., 2001). Family as a factor in reducing sexual risk-taking behavior has also been extensively studied (East, 1996a; Fox and Inazu, 1986; Jessor and Jessor, 1975; Miller et al., 1998; Moore et al., 1986; Newcomer & Udry, 1984, 1985; Small & Luster, 1994; Whitaker, Miler & Clark, 2000). Three important concepts have been identified as significant factors in parental influence that affect adolescent sexual behavior. These concepts include: (1) parent/child communication, (2) parent monitoring/supervising, and (3) parental values (sexual conservatism). Below is a brief review of each key concept of parenting as it relates to sexual risk-taking. These concepts are considered key concepts in reducing adolescent sexual risk-taking behavior based on the findings of previous research.

Parent/child Communication

Generally, parental discussion about sexual issues is a deterrent to adolescent sexual activity (Fox & Inazu, 1980; Newcomer & Udry, 1984, 1985; Whitaker, Clark & Miller, 2000). Studies have shown that daughters whose mothers reported that they discussed sex with their children, did not subsequently have sexual intercourse and were also more

likely to use effective birth control later when they did have sex (Jaccard & Dittus, 2000; Jaccard, Dittus & Gordon, 1996). Therefore, when parents discussed the pros and cons of contraception with their children, this eventually led to favorable sexual practices among females.

It seems, however, that communication on sexual issues between parents and their children is not always conducted in a positive manner (Brock & Jennings, 1993). Brock and Jennings (1993), found that parent-adolescent communications on sexual issues dwelled more on the negative outcomes associated with sexual intercourse rather than on the transmission of information about their biological development and physical changes. This slant to the negative could be due in part to sexual activity that has already been initiated or anticipated.

Studies show that the quality of parent-adolescent relationship, and the degree of a parent's openness to and comfort with discussing sex and sex-related topics, cannot be underestimated in terms of their influence on an adolescent's sexual values and behavior (Hutchinson & Cooney, 1998; Whitaker et al., 1999). These studies show that the qualities of successful parent–adolescent communication are openness, parental comfort with the issues, positive messages and beginning discussions at an early age. Adolescents want to talk to their parents about sex more than their parents do, and they believe that their parents can provide information that would be of great value to them. However, one-third of 15-year-old girls said that neither of their parents had told them how pregnancy occurs, and about half said that they had received no information on sexually transmitted infections or birth control from their parents (AGI, 1994; Hutchinson &

Cooney, 1998). Only 16% of young women and 10% of young men cite their parents as their primary source of knowledge about sexuality (Ansuini et al., 1996). Although parents are more likely than their children to report that they have provided sexuality education (King & Lorusso, 1997), most young people first learn about sex from friends, siblings, teachers, or the media, rather than from their parents (AGI, 1994; Ansuini, et al., 1996).

Generally, parents can directly reduce the sexual risk-taking behaviors of their children by speaking to them openly and concretely about how to resist pressure to become sexually active, how to avoid unprotected intercourse, and by paying attention to their activities, school performance and alcohol use (Hutchinson & Cooney, 1998; Inazu & Fox, 1980; Whitaker et al., 1999). The quality of parent-adolescent communication about sex-related issues has also been measured in the following terms:

- how comfortable the adolescent feels in approaching parents with questions or concerns about sex
- whether or not the adolescent feels that parents will withhold information when such questions are asked
- whether or not the adolescent feels that parents will understand and care about his/her feelings when they talk together about sex
- whether or not the adolescent fears that parents will think that, because he/she is asking such questions, he/she may be interested in initiating sexual activity.

Miller, et al., (1998), found that although the quality of parent-adolescent communication may not have a direct effect on the adolescent's sexual behaviors, it does affect the

adolescent's sexual values and intentions and, therefore, has at least an indirect effect on sexual behaviors. Researchers conclude that adolescents who are sexual risk-takers are more likely than others to have troubled relationships with their parents and, therefore, need the help of other responsible adults in order to lower their sexual risk-taking (Luster & Small, 1994).

Gender and parental communication

A number of studies have investigated gender differences in the level of parental communication. Previous research has shown that daughters are more often the recipient of information on sex than are sons (Dilorio, et al., 1999; Inazu & Fox, 1980; Lefkowitz, et al., 1996). Dilorio, et al., (1999) found that daughters received more information than sons from their mothers and that females were introduced to topics such as consequences of sexual intercourse, protection and biological development. This study also suggested that more emphasis was placed on protection and consequences for males and on normal development and abstinence for females. Thus, while prevention is stressed for females, sexual action seemed to be stressed for males. Additionally, parent-son communication has been found to occur at much lower levels than parent-daughter communication (Nolin & Peterson, 1992). This may be as a result of the participation of the mother, given that the level of communication on sexual topics with father is low for both male and female adolescents. In all types of communication, e.g., biological development, sexual facts, or morality issues, a son's level of communication with parents is much lower than that of a daughter's (Dilorio, et al., 1997; Nolin & Peterson, 1992). Sons, therefore, receive less

sexual education from their parents which may allow them to be more susceptible in general to influence from peers and their culture.

For girls, parental communication appears to reduce the initiation of sexual activity (Bruckner & Bearman, 2003; Moore & Furstenberg, 1986). Daughters who communicated more with their parents developed attitudes and behaviors that reduce both their involvement in sexual behavior and their risk for pregnancy (Bruckner & Bearman, 2003). Sexual behavior discussions between adolescent girls and their mothers have their strongest effects on sexual attitudes in the ninth and 10th grades. Toward the end of high school, and particularly in college, peer approval becomes more influential than parent communication (Treboux & Busch-Rossnagel, 1995).

Research including both sons and daughters confirm that parental communications could be positive for both genders. Only a few studies have specifically made gender comparisons of the influence of parent-adolescent communication on sexual activity. One such study found that daughters of traditional parents were less likely to initiate sexual activity if parents had communicated with them on issues such as sex and TV programs than if they had not (Moore, Peterson & Furstenberg, 1986). These researchers also found that on the other hand, sons of traditional parents were more likely to have initiated sexual activity if they had discussed sex with either parent. For sons, this discussion could be simply a reaction to sexual involvement rather than a preventive action.

Race and parental communication

According to Murray (1992), parent-adolescent communication about topics related to sex may increase sexual activity. In his study, Murray (1992) used a nationally representative sample of black females and found that sexual activity was directly related to receiving sex education from parents. This may be the result of parents communicating about sex with their daughters after they had already initiated sexual activities. Another study conducted by Inazu and Fox (1980) on mother-daughter communication found that the mothers of white adolescents were less likely to bring forward sensitive topics compared to mothers of black adolescents. They found that the more sensitive the subject matter, the more racial disparity there was in the levels of mother-daughter relationships regarding the chances of the mother having ever addressed such topics. More white mothers than black mothers were found to have not discussed sexual intercourse with their daughters.

Additional studies are needed to provide evidence of the manner in which parental communication differs by race. From the evidence available, it can be inferred that blacks communicate more about sexual topics compared to whites. It could therefore be expected that parental communication would decrease sexual activity among black females to a greater extent than among whites. The higher rate of communication may be due to communication after black adolescents have initiated sexual activity.

Parent Monitoring/Supervision

Adolescents involved in sexual risk-taking have been found to be less closely monitored/supervised by parents than those who do not take sexual risks or who abstain altogether from initiating sexual activity (Capaldi, et al., 1996; Hogan & Kitagawa, 1984; Metzler, et al., 1992; Miller, 2001; Miller, 2000; Small & Luster, 1994). These findings suggest that low levels of parental monitoring may influence adolescent sexual risk-taking. More specifically, family rules and household routines (Danziger, 1995; Ku, Sonenstein & Pleck, 1993), parental supervision of dating activities (Hogan & Kitagawa, 1984), and parental monitoring of teens (Luster & Small, 1994; Upchurch, et al., 1999) all have been associated with teens not having intercourse, having a later sexual debut, or having fewer sexual partners. Furthermore, the presence of parental monitoring and supervision in an adolescent's life can also be influenced by family structure. Children whose parents divorced before their adolescent years were less likely to initiate sexual activity compared to those whose parents divorced during their adolescence (Capaldi, Crosby & Stoolmiller, 1996; Dorius, et al., 1993). Several investigators have gone beyond the bivariate relationship to show that single or divorced parents' more permissive sexual attitudes (Thornton & Camburn, 1987), lesser parental supervision, and parents' own dating activity (Whitbeck, Simons & Kao, 1994) help explain why adolescents in some single parent families are at increased risk of becoming sexually active or engaging in risky sexual behavior. Specifying the single parent mechanisms differently, some investigators have reported that the number of parents' relationship transitions or number

of changes in parents' marital status, and time lived with single parents, are related to teens' risk of pregnancy and sexual risk-taking. (Capaldi, Crosby & Stoolmiller, 1996; Miller, Benson & Galbraith, 2001; Wu & Martinson, 1993). A few studies show the effect of parental monitoring as not being effective in decreasing the incidence of adolescent sexual risk-taking. Fox and Inazu (1980) and Newcomer and Udry (1984, 1985) did not find a significant relationship between parental monitoring and the initiation of adolescent sexual activity. Interestingly, Miller et al., (1986) found a curvilinear relationship between parental discipline and adolescents' sexual behavior and permissiveness. They found that as dating rules and discipline increased from low to moderate levels, sexual permissiveness among adolescents and the proportion that initiate sexual activity decreased. However, when both dating rules and discipline increased from moderate to high levels sexual permissiveness and the proportion with sexual experience increased. Generally, studies have found that parental monitoring and supervising decreases adolescent sexual activity.

Gender and parental monitoring and supervising

Gender differences in the effect of parental monitoring and supervising are found in some studies (Jacobson & Crockett, 2000; Mescheke, et al., 2000; Perkins, et al., 1998; Rodgers, 1999; Small & Luster, 1994; Stattin & Kerr, 2000). Parental monitoring levels are significantly higher for females than for males in all racial and ethnic groups (Small & Luster, 1994; Perkins, et al., 1998). Levels of monitoring are greater for females than males due to the negative outcomes associated with sexual activity. One study found that

girls from two-parent intact families had lower incidences of being sexually experienced than boys from similar families (Mescheke, et al., 2000). Adolescent males and females who perceive that their parents monitor particular behaviors (i.e., after school whereabouts, who the adolescent is out with) are less likely to: initiate sexual activity; to have had more than one sexual partner; and/or to have unprotected sex (Rodgers, 1999). Differences for males and females were found, in relation to the particular perceived monitoring behaviors that were related to a decrease in the odds of an adolescent being sexually at risk. For female adolescents, high levels of perceived parental monitoring of the girls' after-school whereabouts decreased odds of classification in the sexually active group. For males, high levels of perceived parental monitoring of who the boys are with when they go out decreased odds of classification in the sexually at risk group.

Race and parental monitoring

There is very little information available on racial and ethnic differences in parental monitoring and its effect on adolescent sexual risk-taking behavior. In a study utilizing a nonrandom sample of adolescents from a large midwestern state, levels of parental monitoring were found to be significantly higher among sexually inexperienced adolescents than among many sexually experienced adolescents for all race-gender groups except for black males (Perkins, et al., 1998). Another study looking at black and Hispanic adolescents presents evidence supporting the idea that parental monitoring resulted in lower frequency of intercourse and number of sexual partners similarly for both ethnic groups (Miller, et al., 1999). These results were interpreted as indicating

parents could influence adolescent sexual behavior through parental monitoring. While the sample consisted only of minority respondents in urban areas, parental monitoring was found to reduce sexual activity and increase condom usage in all areas for both ethnic groups and genders. These findings are supported by work done by Hogan and Kitagawa (1984). In a Chicago study, they observed that low levels of parental supervision were associated with a higher proportion of pregnancies and being sexually active, among a sample of black adolescents. Since these studies focus only on minorities, generalizations cannot be made to white adolescents.

Parental Values

Parental values are often referred to as parental conservatism. Levels of adolescent sexual activity have been known to be affected by levels of sexual conservatism of parents. Sexually experienced male and female adolescents are less likely to come from families where parents hold conservative sexual values about teenage sexual behavior (Small & Luster, 1994). Adolescents who perceived their parents as accepting of premarital adolescent sexual activity were more likely to be sexually experienced. Jaccard and Dittus (2000) found that adolescents' perceptions of parental approval are more important than the actual levels for influencing their sexual activity. This is the case because it is the adolescent's interpretation of parental approval or permissiveness that translates into decisions regarding their sexual activities. One study found that mothers are more liberal in their sexual permissiveness than their daughters perceive (Newcomer & Udry, 1984). The researchers suggest that this could prove quite beneficial since

adolescents' perceptions of parental attitudes have more impact on their sexual activity than actual parental values. Adolescents may consider parental conservatism to be a sign of disapproval toward sexual activity that could in turn decrease their chances of participating in risky sexual behavior. If parents disapprove of sexual activity, adolescents are less likely to be sexually active.

Gender and Parental Values

Small and Luster (1994) found that for both males and females, low levels of permissive parental values existed for those adolescents who were less likely to be sexually experienced than those who were not. Males underestimate their mothers' disapproval of adolescent sexual behavior to a greater extent than do females (Jaccard & Dittus, 2000). This diminishes the effect of parental approval or disapproval towards adolescents' sexual activity for males when compared to females. Additionally, permissive parental values regarding adolescent sexual behavior trigger more sexual risk-taking propensity among males than females (Small & Luster, 1994). Small and Luster's (1994) study suggests that parental permissiveness may be associated with increases in sexual risk-taking for boys.

Race and parental values

Very little information is available on ethnic differences in the effect of parental values on adolescent sexual risk-taking behavior. Udry and Billy (1987) found that whites are less sexually permissive than blacks. White adolescents from homes where

parents hold conservative values are expected to show lower levels of sexual risk-taking than blacks. The reasons for this difference are not clear. All national samples show that there are considerable racial differences in adolescent sexual activity (Moore, et al., 1995). Black adolescents are more likely to have had sexual intercourse than white or Hispanic adolescents. These racial differences, which are partly influenced by socioeconomic status and contextual differences, hold true for both males and females. What is still not clear, however, is the impact of parental values on racial differences observed in adolescent sexual behavior.

Peer Factors

During adolescence, peers represent an emotional outlet providing a means by which adolescents may express themselves in ways that may not be possible at home. Peers may, therefore, replace parents as an important social influence. While parental influence is most often viewed as positive, peer influence is usually perceived as detrimental to adolescent sexual development (Biglan, et al., 1990; Dilorio, 1997). Some researchers suggest that peer influence is not always negative. There are also positive pressures to participate and excel in athletics, music, and various other types of extracurricular activities (Steinberg, 1996). This can be viewed as a way for adolescents to become better rounded, exploring positive domains other than academics. Most research, however, typically explore peer influence on adolescent initiation of sexual activity, drug use and other activities that may have significant negative outcomes for adolescents. In the area of sexual activity, peers influence each other in three important ways: a) through peer

sexual behavior and delinquency, b) through peer interactions, and c) through peer intimacy. Research indicates that peer sexual behavior patterns impact adolescent sexual activity. Adolescents whose peers have initiated sexual activity are more likely to initiate sexual activity themselves (Bearman & Bruckner, 1999; Miller, et al., 1997; Rome, et al., 1994). The sexual behavior pattern of the peer group has been found to be instrumental in determining intentions as well as initiation of sexual activity in adolescents (Kinsman, Schwartz & Furstenberg, 1997). Moreover, when an adolescent's peers are involved in risky sexual behaviors such as initiating sexual intercourse, he or she is more likely to engage in other risk-taking as well (Bearman & Bruckner, 1999). Some researchers suggest that adolescents who are negatively influenced by their peers may also be experiencing a deficit in parental involvement (Hutchinson & Cooney, 1998; Inazu & Fox, 1980; Whitaker, Miller & Clark, 2000). Those who do not have a high level of support from their parents are more likely to become involved in undesirable behaviors. Support and effective communication lessens an adolescent's vulnerability to negative peer pressure.

Other studies suggest that while there are strong similarities between the sexual behaviors of peers, the congruence may not reflect peer pressure. Billy and Udry (1985) examined causes of peer similarity considering (a) peer influence; (b) termination of friendships; and (c) friendship acquisition. Adolescents did not end friendships due to differences in sexual behavior nor did they succumb to peer pressure to conform to sexual standards. Instead, a similarity of sexual behavior occurred via acquisition of friends who have similar sexual behaviors.

Although peer norms seem to be important determinants of sexual initiation (Costa, Jessor, Donavan & Fortenberry, 1995; Furstenberg, Morgan, Moore & Peterson, 1987), the complex relationship between the different components of peer norms and adolescent behavior has yet to be clearly explained. Some researchers suggest that due to the subjective nature of peer norms they are important determinants of behavioral change because these attitudes can influence intention to behave (Baranowski, 1992).

Gender effect on peer behavior and sexual activity

A number of studies provide evidence to suggest that peer behavior affects the sexual behavior of males and females differently (Billy & Udry, 1985; Perkins et al., 1998). These findings may be complicated by the difficulty faced in separating race-gender effects. Among whites, males are influenced to a lesser degree by their same-sex friends than are females. Billy and Udry (1985) suggest that white males acquire friends that have similar sexual behavior patterns, but they are not influenced in their sexual behavior as white females are by their same-sex peers. The reason may lie in the fact that females' relationships with their same-gender friends may be more influential because they are more affective and emotional in nature, whereas males' relationships with their same-sex friends are more instrumental. The strong affect associated with females' conversations about sex has greater influence on their peers than it does for males because their interaction is on a more personal emotional level. This is supported by findings indicating that females have higher levels of intimacy with their friends than males (Asher & Paquette, 2003). Billy and Udry (1985) also found that white females

who had not yet initiated sexual activity were much more likely to do so if their best friends of both sexes had previously initiated sexual activity. They explain that a female friend can influence a female to initiate sexual activity by persuading or structuring opportunities for this to occur. Such effects were not found among blacks, male or female. It is argued that black adolescents have more permissive attitudes towards sex, irrespective of their friends influence. This allows them to be less affected by their peers' sexual risk-taking if their peers have similar behavior patterns. Overall, females may be influenced by their peers to engage in sexual behavior to a greater degree than males.

Additionally, more than 1,800 junior high school students were surveyed regarding sexual activity. Among the many findings, it was found that females perceived less peer pressure for sex and more support for waiting than males. However, more males anticipated partner pressure for sex and believed that they might "have sex" before marriage (DeGaston, Weed & Jensen, 1996).

Race and peer behavior

Studies have shown race differences in the impact of peer behavior on adolescent sexual activity (Billy & Udry, 1985; Giordano, et al., 1993). Giordano et al.'s (1993) study indicates that blacks show lower levels of peer conformity than whites. They also showed that black adolescent females were less likely to choose similar friends, had lower levels of peer intimacy, and considered it less important to associate with a group of females compared to whites. Similarly, Billy and Udry (1985) found that the sexual behavior of same-sex friends was more similar for whites than for blacks. They found

greater homogeneity in sexual behavior among whites than blacks. Therefore, while the research of Billy and Udry (1985) indicates that the sexual behavior of whites is similar to that of their peers, Giordano et al.'s (1993) study suggests that blacks do not necessarily mingle with peers with similar sexual behavior.

More studies are needed to provide information on why blacks are not impacted by their peer sexual behavior in the same manner in which whites are impacted. Current studies suggest that white adolescents may more likely be influenced by the sexual behavior pattern of their peers than blacks. Blacks, however, may be more autonomous in nature, which prevents their sexual behavior from being influenced by their peers, as is the case with white adolescents.

Coercion as a risk factor for early initiation of sexual activity

The problem of early adolescent sexual behavior is further exacerbated as young men frequently interpret their masculinity as a mixture of sexuality, power and aggression. This is then often acted out in various forms of pressure and coercion exerted on girls, from manipulation to physical violence (Coker, et al., 2000; Felby, Ainslie & Greb, 1991). Adolescent males are also (a) less inclined to consider affection a precursor to sexual intimacy than adolescent females (Pleck, et al., 1993; Whitbeck, Hoyt, Miller & Kao, 1992), (b) more likely to believe sexual coercion strategies are justifiable (Felby, Ainslie & Greb, 1991; McKelvie & Gold, 1994) and (c) more likely to respond to antisocial peer pressure to engage in this type of behavior (McKelvie & Gold, 1994; Murnen & Byrne, 1991). For females, Coercion is associated with poor protection from

pregnancy and sexually transmitted infections as well as long-term psychological problems with sexuality (Pleck, et al., 1993).

Coercive or forced sexual intercourse is problematic for many reasons. Since initial sexual intercourse experiences are usually important (and sometimes defining) events in the lives of young people, forced sexual intercourse, particularly at first sexual experience, is related to long lasting negative effects (Browning & Lauman, 1997; Pleck, et al., 1993). Evidence suggests that girls with involuntary first sexual experience at a young age show heightened sexual activity later in adolescence and even in adulthood (Moore, Driscoll, & Lindberg, 1998). First time sexual intercourse among many younger adolescents has been found typically to be an unplanned and unprotected event, often leading to pregnancy (Moore, Driscoll & Lindberg, 1998; Moore, Miller, Sugland, Morrison, Glei & Blumenthal, 1995). The fact that this event may also have been coercive further aggravates the situation since individuals who have been coerced into having sex may face greater difficulties in establishing relationships of trust and intimacy later in life (Pleck, et al., 1993).

Addressing the Problem of Adolescent Sexual Activity

In recent years there has been an increase in the attention being paid by public health officials to the development of new programs addressing adolescent sexual behavior and its consequences. This attention has been accompanied by considerable controversy around what might be the most effective interventions. There has been much political support for abstinence-only education programs, backed by significant funding

(DiClemente & Houston-Hamilton, 1999). Up to the present time, there has been little data supporting the efficacy of such programs (Kirby, 1997; Kirby, 2001). Outcomes from these programs have shown an increase in knowledge among those who participate. Research in the field of adolescent sexual behavior has shown that knowledge is only weakly related to actual behavior (Kirby, 1997) Knowledge alone is not sufficient to change behaviors. The reasons why some adolescents abstain from sexual intercourse compared with reasons for sexual involvement are still not clear. This information would be useful in the development of program and curricula intended to promote the delay of onset of sexual intercourse.

Most pregnancy prevention programs target with limited success adolescents who have already initiated sexual behavior (Kirby, 1997). The bulk of the studies investigating adolescent sexual behavior also focus on this particular group, adolescents who are already sexually active. Information is therefore missing for an important period of adolescent sexual development. Before adolescents become sexually active, there is usually a period of involvement in pre-sexual activities such as spending time alone with a boy or girl they like, or having a boyfriend or girlfriend (Bruckner, & Bearman, 2003). Little is known about this period of time and the factors that influence adolescents' decisions to initiate these pre-sexual behaviors or to delay these behaviors. This study investigated this period of adolescent sexual development.

Theoretical Background

This work draws on two theoretical perspectives: Miller's Typology of Adolescent Heterosexual Experience and Ajzen and Fishbein's Theory of Reasoned Action/Theory of Planned Behavior. The Typology of Adolescent Heterosexual Experience is a method of classifying adolescent sexual behavior which allows one to capture all levels of sexual activity as well as important behavioral intentions (Miller et al., 1997). The Theory of Reasoned Action/Theory of Planned Behavior provides a framework for studying adolescents' attitudes towards behavior (Ajzen & Fishbein, 1980, 1977). The premise of this theory is that one's attitudes and norms are the driving forces in behavioral decisions. Therefore adolescents' intention to engage in sexual behavior is a direct result of their beliefs and attitudes. Taken together, these two perspectives provide the basis for understanding young adolescents' pre-sexual behavior.

Miller's Typology of Adolescent Heterosexual Experience

In order to effectively address the health needs of adolescents, prevention experts have for some time tailored the health related messages to certain dimensions of the audience, including age, gender, race/ethnicity, educational level, developmental status and sexual orientation. Rarely however, have prevention programs been tailored to the specific sexual experiences of adolescents, a dimension which may vary widely. Additionally, most studies examine adolescent sexual behavior by placing individuals into two groups: sexually active versus not sexually active (Brown, DiClemente & Beausoleil, 1992; Cooper, Peirce & Huselid, 1994; DuRant, & Sanders, 1989). While this

dichotomy clearly highlights actual behavior, important behavioral intentions and pre-sexual practices remain hidden (Miller, et al., 1997). Miller, et al. (1997) suggests that a classification system that incorporates meaningful distinctions in the forms, frequencies and patterns of adolescent sexual behavior should allow for the development of more sensitive and effective interventions. Adolescents who anticipate initiating sexual behavior might ignore abstinence messages. Other adolescents may not be sexually active and may not participate in sexual activity within the next year, thus may get some context from prevention messages. Adolescents' views are therefore likely to influence their responses to abstinence messages and prevention interventions. Miller et al. (1997) suggest that a clearer understanding of factors that influence behavioral intentions related to sexual activity will serve to bolster the design of effective STD and pregnancy prevention programs.

Overview of Miller's Typology of Adolescent Heterosexual Experience

Miller, et al. (1997) have developed a typology for adolescent heterosexual experience where sexual activity is broken down into five patterns of sexual experience: delayers, anticipators, one-timers, steadies, and multiples. Studies utilizing this typology have shown that delayers had never engaged in penile-vaginal intercourse and reported a less than 50% likelihood of first penile-vaginal intercourse occurring in the next year. Anticipators had never engaged in penile-vaginal intercourse but reported a 50% or greater likelihood of first penile-vaginal intercourse occurring in the next year. One-timers initiated penile-vaginal intercourse but had engaged in only one penile-vaginal act.

Steadies initiated penile-vaginal intercourse, reported one sexual partner, and engaged in more than one penile-vaginal sex act. Multiples initiated penile-vaginal intercourse, reported more than one sexual partner, and had engaged in more than one penile-vaginal sex act (Miller et al., 1997). Figure 1 shows a graphic representation of what Miller and colleagues considered "A New Typology for Adolescent Heterosexual Experience."

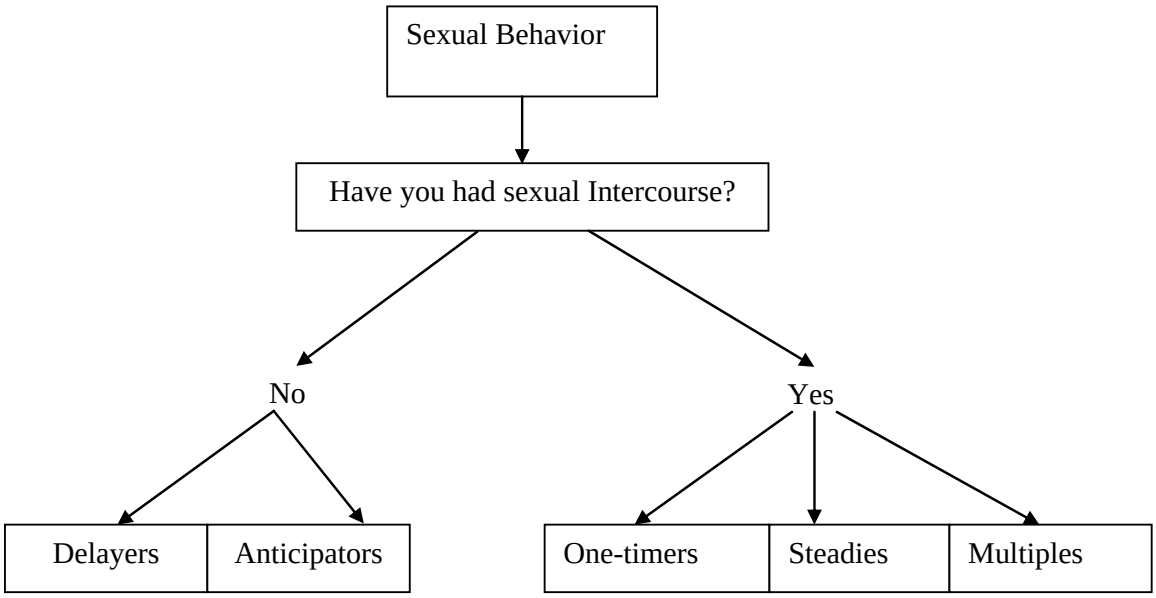

Figure 1: A New Typology of Adolescent Heterosexual Experience

To construct a classification system of adolescent sexual behavior that recognizes the full range of experiences, Miller, et al. (1997) used four behavioral indicators in defining five patterns of sexual experiences. These indicators included: (1) initiation of penile-vaginal intercourse, (2) number of lifetime penile-vaginal sex partners, (3) number of lifetime penile-vaginal sex acts, and (4) for adolescents who had never engaged in penile vaginal intercourse, their expressed expectation of initiating penile-vaginal sex in the next year.

Attempts to decrease teen pregnancy and STD transmission must demonstrate an understanding of these patterns of adolescent sexual behavior. Miller, et al.,'s (1997) Typology of Adolescent Heterosexual Experience provides important information for designing appropriate prevention and intervention programs. This typology can also be used in understanding behavior and behavioral intentions for young adolescents. At this stage, most adolescents are not engaged in sexual activities; therefore, all five patterns of sexual experience would not be applicable. Some young adolescents however, are involved in various forms of pre-sexual activities, while others are not. A modified version of Miller, et al.'s (1997) classification of adolescent heterosexual experience is useful in breaking down the patterns of pre-sexual experience for this group of adolescents.

The Typology Of Young Adolescent Pre-sexual Experience

For the purposes of this study, four patterns of pre-sexual experience will be defined using three behavioral indicators. These indicators will include 1) kissing someone you really like on the mouth, 2) number of times you have kissed on the mouth with someone you really liked, 3) the expectation of initiating kissing on the mouth in the next year. A graphic representation of this typology for young adolescents' pre-sexual

experience can be found in Figure 2.

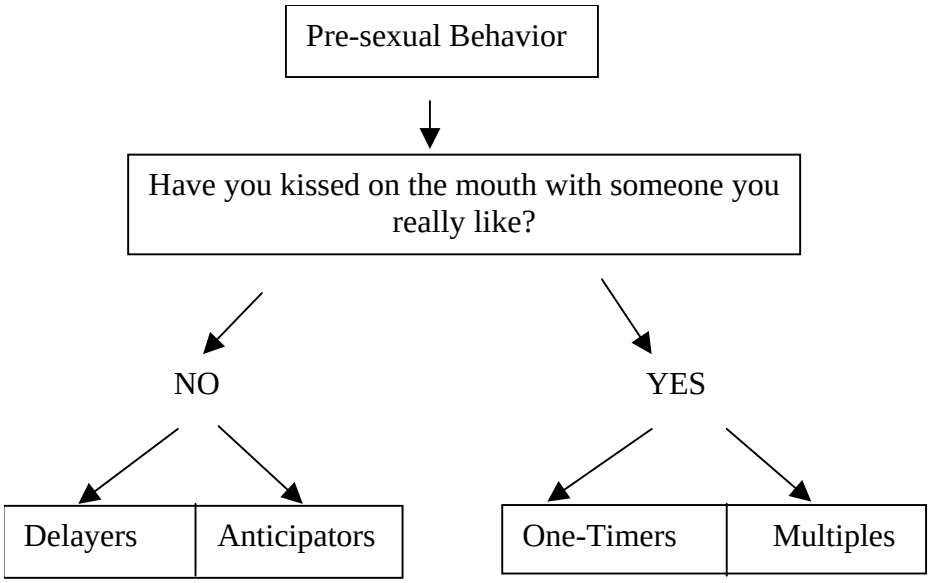

Figure 2. Typology of Young Adolescent Pre-sexual Experience

In an effort to delay the initiation of sexual activity in young adolescents, we must learn more about these patterns of pre-sexual experience. The Typology of Young Adolescent Pre-sexual Experience, adapted from the typology developed by Miller and colleagues, provides critical information necessary for the design and development of appropriate prevention programs. Recognizing new typologies of sexual behavior allows us to conceptualize changes in the design of programs. With a focus on utilizing scientific approaches, theories and models applicable to behavioral changes can be incorporated into subsequent education programs. These scientific theories and models will allow us to examine adolescents who are more likely to engage in risk-taking behavior before they initiate these activities and focus on these adolescents for preventative programs.

The Theory of Reasoned Action/Theory of Planned Behavior

Overview of the Theory of Reasoned Action/Theory of Planned behavior.

A theory that holds great promise for programs geared at teen pregnancy prevention and STD reduction is The Theory of Reasoned Action/Theory of Planned Behavior by Ajzen and Fishbein (1980). Ultimately, the goal of this theory is to predict and understand human behavior.

The Theory of Reasoned Action (Ajzen & Fishbein, 1980, 1977) suggests that there is one primary determinant of behavior, namely the person's intention to perform it. This intention is itself viewed as a function of two determinants: (1) the person's attitude toward performing the behavior (based on his/her beliefs about the consequences of performing the behavior, i.e., his or her beliefs about the costs and benefits of performing the behavior); and (2) the person's perception of the social (or normative) pressure exerted upon him or her to perform the behavior.

The Theory of Reasoned Action has its roots in the field of social psychology. This theory grew out of the 20th century when social psychologists attempted to explain why attitudes impact behavior. They wanted to know how and why people's beliefs changed the way they acted. In the 1930s attitude was defined by psychologists as an emotion or thought with a behavioral component. They suggested that behavior could be nonverbal or verbally expressed. As noted by Ajzen and Fishbein (1980), social psychologists during this time theorized that attitude included behavior and cognition and that attitude and behavior were positively correlated. It wasn't until the late 1960s however, that the discussion and theorizing about attitude developed into The Theory of Reasoned Action.

Ajzen and Fishbein joined forces to explore ways to predict behaviors and outcomes. They worked on the assumption that "individuals are usually rational and make systematic use of information available to them and that people consider the implications of their actions before they decide to engage or not to engage in a given behavior" (Ajzen & Fishbein, 1980, p5). Considering all this, they developed a framework that looks at behavioral intentions rather than attitudes as the main predictors of behaviors. This framework is called The Theory of Reasoned Action. The theory was later found to have several limitations. One of the main limitations was with people who have, or feel they have, little power over their behaviors and attitudes. The argument can be made that young female adolescents, particularly those who have older boyfriends, are more likely to be coerced into sexual activity due to the perception that they have little or no control. This would increase their likelihood of engaging in risky sexual behavior. Schifter and Ajzen (1985) suggest that aspects of behavior and attitude are on a continuum – from one of little control to one of great control. A third element was therefore added to the theory to balance these observations. This element was the concept of perceived control. This resulted in the newer theory known as the Theory of Planned Behavior (Schifter & Ajzen, 1985). This Theory is the same as The Theory of Reasoned Action except for the addition of the perceived behavioral control component. The perceived behavioral component consists of control beliefs and perceived power. These factors state that motivation, or intention, is influenced by how difficult the task is perceived to be and whether the person expects to successfully complete the behavior. The purpose of the theory is threefold:

1. To predict and understand motivational influences on behavior that are not under the individual's volitional control.
2. To identify how and where to target strategies for changing behavior.
3. To explain virtually any human behavior such, as why a person buys a new car, votes against certain candidates, or engages in sexual risk-taking.

The Theory of Reasoned Action therefore provides a framework to study attitudes toward behaviors. The most important determinant of a person's behavior is behavior intent. Intention to perform a behavior is a combination of attitude toward performing the behavior and subjective norm. The individual's attitude toward the behavior includes behavioral beliefs, evaluation of behavioral outcome, normative beliefs, subjective norms, and the motivation to comply.

Key Constructs of the Theory of Reasoned Action/Theory of Planned Behavior

1. Behavior: It is the transmission of intention or perceived behavioral control into action.

2. Behavioral Intention: It is an indication of how hard people are willing to try and how much of an effort they are planning to exert in order to perform the behavior. Behavioral intentions are influenced by three components: a) a person's attitude toward performing the behavior, b) the perceived social pressure, called subjective norm, and c) the perceived behavioral control.

3. Attitude: It is the first determinant of behavioral intention. It is the degree to which the person has a favorable or unfavorable evaluation of the behavior in question.

4. Subjective Norm: This is considered the second predictor of behavioral intention. It is the influence of social pressure that is perceived by the individual to perform or not perform a certain behavior. The social pressure includes perceptions about how family and friends will perceive the outcome of the behavior and the degree to which this influences whether the behavior is carried out. Subjective norms are only in relation to the opinions of persons considered to be significant or important.

5. Perceived Behavioral Control: It is the third antecedent of behavioral intention. This construct is defined as the individual's belief concerning how easy or difficult performing the behavior will be. It often reflects actual behavioral control.

6. Volitional Control: The actual willful control over the behavior.

Behavior, then, is the transmission of intention into action. The theory is represented symbolically as follows:

$$B \sim I = (Aact) + (SN)$$

Where B = Behavior,

I = Intention,

Aact = the person's attitude towards the behavior

SN = the influence of the person's Subjective Norms

An example:

Attitude: "I think having sex at my age could get me in trouble with pregnancy or STDs"

Subjective Norm: " I bet my mom does not want me to have sex at my age"

Intention: "I want to wait until I am much older to have sex"

Behavior: “I do not have a boyfriend, I have not been on any dates and I have not had sex”

A graphic representation of the Theory of Reasoned Action can be found in Figure 3 (Ajzen and Fishbein, 1980,1977).

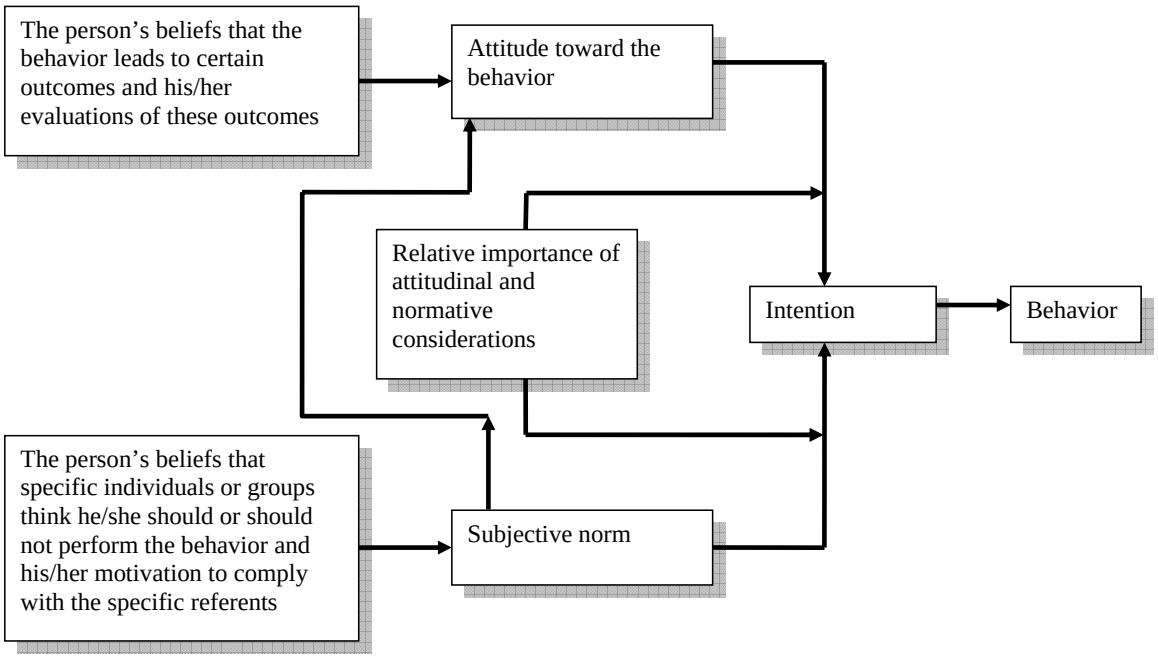

Figure 3. Theory of Reasoned Action

The Theory of Reasoned Action has been applied in a number of studies over the years. In one study, the Theory of Planned Behavior was used to gain a clearer understanding of the factors associated with regular exercise in order to plan more effective programs in heart disease prevention (Downs, Symons & Heather, 2003). This study was conducted using a self-administered postal questionnaire sent to a sample of 2,269 men 30 to 60 years of age. Nearly a quarter (23.3%) of respondents were physically

inactive, of whom 10.5% were in the pre-contemplation (not yet thinking about exercise) and 12.8% in the contemplation stages; 42.1% exercised less than twice a week, of whom 22.4% were in the preparation I (actually taking steps to start exercising) and 19.7% in the preparation II stages. Only 34.6% were in the action stage, exercising regularly for at least 20 minutes twice a week or more with the intention of continuing to do so. Logistic regression indicated that the variables derived from the Theory of Planned Behavior, namely attitude, subjective norm and perceived behavioral control, were differently associated with the stages of behavior. Perceived behavioral control was strongly significant in all stages. Attitude was related to stages in which individuals had intention of exercising (contemplation and preparation II). In contrast, subjective norm seemed to be associated with stages in which individuals had no intention of doing so (pre-contemplation). By identifying the specific needs of sub-groups, the results helped define programs most likely to accelerate men to the stage of regular exercise, part of an effective strategy for heart health promotion in this high-risk population.

In basic terms, The Theory of Reasoned Action/Theory of Planned Behavior (Ajzen & Fishbein, 1980) says that a person's behavior is determined by their attitude towards the outcome of that behavior and by the opinions of the person's social environment. Shifter and Ajzen (1985) proposed that a person's behavior is determined by his intention to perform the behavior and that this intention is, in turn, a function of his attitude toward the behavior and his subjective norm. The theory, therefore, suggests that norms and attitudes are the driving forces in behavioral decisions. When applied to

adolescent sexual behavior, this theory will allow for the development of programs capable of effectively targeting adolescents in all stages of sexual development.

The Theory of Reasoned Action/Theory of Planned Behavior and Pre-sexual Behavior

While the Theory of Reasoned Action/Theory of Planned Behavior is broad enough to apply to behaviors in general, it is also uniquely equipped to address adolescent sexual behavior in particular. It offers a potentially useful framework for explaining and understanding why certain individuals choose to engage in pre-sexual risk-taking behavior and others do not. Specifically, the theory when applied to young adolescent pre-sexual behavior posits that adolescents consider the implications of their actions before they decide to engage or not to engage in these activities. The assumption is, therefore, that their decisions to engage in pre-sexual activities are under volitional control and that this behavior immediately follows their intention to engage or not engage in a pre-sexual act.

Summary of the Study

Adolescents are initiating sexual activity at younger ages, thereby increasing the risks associated with adolescent sexual activity (Philliber & Carrera, 2003; Santelli, et al., 1999). Early initiation of sexual activity is associated with significant negative personal and public health outcomes. A number of factors have been identified as influencers of adolescent sexual risk-taking. Family and peer factors are two important factors found to be particularly influential on adolescent sexual behavior (Resnick, et al., 1997; Small &

Luster, 1994). These factors play a significant role in the development of adolescent beliefs and attitudes towards sexual activity.

In an effort to reduce adolescent sexual activity and the associated risks, prevention programs target, with limited success, adolescents who have already initiated sexual behavior (Kirby, 1997). Additionally, the bulk of studies investigating adolescent sexual behavior focus on sexually active youths, typically youths over the age of 12. Information is therefore missing for younger adolescents. Within this population, some may already be sexually active, some may have the intention to become sexually active within a specified time, while others may have made the decision to delay the onset of sexual activity. Prevention programs may not have the success desired because of a lack of understanding of the patterns of adolescent sexual behavior.

Miller, et al.'s (1997) Typology of Adolescent Heterosexual Experience offers a framework for examining the patterns of adolescent sexual behavior as well as for the design of more effective prevention programs. A modified version, The Typology of Young Adolescent Pre-sexual Experience, can be used in understanding behavior and behavioral intentions for young adolescents. At this stage most adolescents have not initiated sexual intercourse but may have the intention to do so. This typology provides an important tool in the design of prevention programs addressing young adolescents' pre-sexual behavioral intentions. The Theory of Reasoned Action/Theory of Planned Behavior (Ajzen & Fishbein, 1980; Schifter & Ajzen, 1985) offers a theoretical framework for studying adolescents' attitudes toward sexual activity. The theory proposes that an adolescent's decision to engage in sexual activity is determined by

his/her attitude towards the outcome of that behavior and by the opinions of important persons in their social environment. The theory has been applied to a number of studies validating its usefulness in determining behavior. From a public health standpoint, the integration of both The Typology of Young Adolescent Pre-sexual Experience and The Theory of Reasoned Action into prevention programs may ultimately lead to more successful results in the delay of the initiation of sexual activity in young adolescents, as well as a reduction in the risks associated with being sexually active.

The present study employs both The Typology of Young Adolescent Pre-sexual Experience and The Theory of Reasoned Action to examine young adolescents' intentions to engage in pre-sexual activities. The influence of attitudes, and social norms will be investigated in an effort to understand the role of family and peers in adolescents' decisions to delay or engage in pre-sexual activities.

Chapter III

Methodology

The primary purpose of this study was to collect and analyze data in order to examine whether measures of attitude, social norm, barriers, influencers and previous experience can be used to distinguish between young adolescents who anticipate engaging in pre-sexual behaviors (anticipators) compared to young adolescents who expect to delay such behaviors (delayers). Pubertal timing was also examined as a possible predictor of anticipators and delayers for girls. In addition, the study sought to determine whether attitudes, social norms, barriers, influencers and previous experience varied by ethnicity and gender. This chapter is divided into four sections: participants, instrumentation, measurement of theoretical constructs, and data analysis.

Participants

Participants used in this study were elementary school students, age 9-11 years old, enrolled in an after-school program in Austin, Texas. In order to ensure representation of African-American, Hispanic, and Caucasian students, schools were targeted in ethnically mixed neighborhoods, as well as in neighborhoods with predominantly African-American and Hispanic families. Two hundred and four children were targeted for the study. The final sample that was utilized included 69.6% of those targeted or 142 students; 56 boys and 86 girls, in grades 4 and 5 from 13 school sites. The mean age of the students was approximately 10.2 years with a standard deviation of 0.79. Sixty-one

percent of the students were females and 39% were males. The ethnic groups were well represented with 34% Caucasians, 32% African Americans, 27% Hispanics and 7% other. Tables 2 and 3 provide a summary of demographic information for the sample.

Table 2
Demographic Factors

		Total Sample	
Age	9	30.3%	(N= 43)
	10	38.0%	(N= 54)
	11	31.7%	(N= 45)
Gender	Male	39.4%	(N= 56)
	Female	60.6%	(N= 86)
Ethnicity	Hispanics	27.5%	(N= 39)
	African-American	31.7%	(N= 45)
	Caucasian	34.5%	(N= 49)
	Other	6.3%	(N = 9)
Family Structure	Mother and father	43.0%	(N= 61)
	Mother only	21.1%	(N= 30)
	Father only	1.4%	(N= 2)
	Mother and other relatives	11.3%	(N= 17)
	Father and other relatives	.7%	(N = 1)
	Grandparents	2.1%	(N= 3)
	Father and stepmother	2.8%	(N= 4)
	Mother and stepfather	16.9%	(N= 23)
	Other	.7%	(N= 1)
Typology of Young Adolescent Pre-sexual Experience	Delayers	28.2%	(N= 40)
	Anticipators	71.8%	(N=102)

Table 3
Demographics of Total Sample by Gender and Ethnicity

	Ethnicity				
Gender	Hispanic	African American	Caucasian	Other	Total
Female	(N=27)	(N=26)	(N=31)	(N=2)	60.6% (N=86)
Male	(N=12)	(N=19)	(N=18)	(N=7)	39.4% (N=56)
Total	27.5% (N=39)	31.7% (N=45)	34.5% (N=49)	6.3% (N=9)	

Instrumentation

Measures

The Young Adolescent Health Questionnaire was developed specifically for this study and designed to examine the pre-sexual behavioral intentions of young adolescents. Previous studies examining adolescent sexual behavior have concentrated on children older than 12 years old. Available questionnaires were designed specifically with this older age group in mind, with a focus being on the dichotomy of being sexually active versus not sexually active. Most of the questions in these questionnaires were not appropriate for the age group targeted by this study, hence the need to develop an instrument.

With the assistance of psychologists and health educators, the instrument was reviewed and checked for content validity. The instrument was also reviewed by the University of Texas at Austin's Institutional Review Board on Studies Involving Human Subjects to ensure that the items contained were suitable for children of the targeted age range. The questionnaire was pre-tested by six 9- to 11-year-old young adolescents in the

participating school district in order to ensure that the questionnaire was appropriate for the reading level and vernacular of students targeted for the study. Pre-testing was also necessary for checking the amount of time needed to complete the questionnaire. The pre-test revealed that students were familiar with the terms used and had no problem understanding the questions. The survey consisted of questions that examined social norms, attitudes, barriers, influencers and previous experience related to pre-sexual activity and intentions. All six students completed the questionnaire in less than 30 minutes. Fifty items were included in the survey. Questions had Likert response patterns such as “all or almost all” to “none,” and “definitely true for me” to “definitely not true for me.” Appendix A contains a complete duplication of the survey administered to the participants. The measurement of theoretical constructs section provides a detailed outline of the specific items that were used in this study.

Data Collection

The researcher for this project contacted the director of an after-school program serving the Austin Independent School District to request participation in the study. The request was made for permission to invite all 4th and 5th graders from thirteen different schools in the program to participate in the study. In addition to permission from the program director active parental consent was required for students to participate in the study. Parental consent was obtained using an informational letter, written in both English and Spanish, and approved by the University of Texas at Austin’s Institutional Review Board on Studies Involving Human Subjects and the director of the after school

program. Letters and refusal forms were given directly to parents at the time they picked up their child from after-school care, or sent home with the student. Parents who did not want to have their child participate could return the refusal forms directly to the researcher or to the site director of the after-school program. Two hundred students were targeted for the study with an acceptance response of 176. Of the 176 students whose parents had signed a consent form, 142 participated in the study. Thirty four students were absent on the day the questionnaire was administered at their school. Data was collected over a three week period, one afternoon per site. Students assented to participation and were assured that all responses were voluntary and confidential. In an effort to maintain anonymity, students were instructed not to affix their names or any identifying information on the survey forms. Participating students completed a structured, pencil-paper questionnaire during their regularly scheduled center time. Students selected their answers to the questions by circling the letter next to the response choice.

Measurement of Theoretical Constructs

The Typology of Young Adolescent Pre-sexual Experience, as illustrated in Figure 2 (see page 48**)**, divides individuals who have not kissed on the mouth with someone they really like into two groups: delayers and anticipators. These groups vary based on their intentions of kissing on the mouth within the year. As outlined in Figure 3 (see page 53), The Theory of Reasoned Action (Ajzen & Fishbein, 1980) suggests that an individual's attitude and social norm toward the behavior can predict behavioral intentions. Research

questions in this study examined young-adolescents' attitudes and social norms toward pre-sexual behavior in order to distinguish the differences between young adolescents described as delayers or anticipators. In addition, this study examined the role of barriers, influencers, and previous experience on behavioral intention status.

The 50-item questionnaire was divided into seven sections: 1) perception of peer norms regarding the initiation of pre-sexual behaviors (peer norms); 2) perception of parents' standards regarding young adolescents' initiation of pre-sexual activities (parents' standards); 3) self-reported experiences related to pre-sexual activities (previous experience); 4) self-reported standards regarding adolescent pre-sexual activities (own standards); 5) self-reported reasons for not kissing on the mouth or for kissing on the mouth (barriers and influencers); 6) own beliefs; and 7) demographic questions.

1. Attitude Towards Pre-sexual Activity--The construct of attitude towards behavior was measured by five belief variables (section 6 of questionnaire) and five own standard variables (section 4). Subjects were asked: (a) "Is it OK for kids my age to kiss on the mouth with someone they really like?"; (b) "Is it OK for kids my age to have a boyfriend/girlfriend?"; (c) "Is it OK for kids my age to spend time alone with a boy or girl they really like?"; (d) "Is it OK for kids my age to go on dates?" (e) "Is it OK for me to have boyfriend or girlfriend now?" Possible responses to the questions were based on a 4-point Likert Scale ranging from "definitely not OK" to "definitely OK". Participants also responded to five statements about their own beliefs. The statements were: (a) I believe that girls are more popular if they have a boyfriend; (b) I believe that boys are more popular if they have a girlfriend; (c) I believe that having a boyfriend or girlfriend is

okay because everyone else my age does; (d) I believe that kids my age should wait to have a boyfriend or girlfriend; and (e) I believe kids my age should wait until they are older to kiss on the mouth with a boy or girl they really like. These five statements were based on a 5-point Likert Scale with responses ranging from "definitely true for me" to "definitely not true for me". A single scale score was provided from the response options that sum the ratings of the individual items. Higher scores indicate students who are more likely to have favorable attitudes towards pre-sexual activity.

2. Peer Norms -- The construct of peer norms was measured with the following six questions about peer behaviors: (a) How many of your friends have a boyfriend or girlfriend?; (b) How many of your friends have kissed on the mouth with a boy or girl they really like?; (c) How many of your friends think people your age should wait until they are older to kiss on the mouth with a boy or girl they like?; (d) How many of your friends have been on dates?; (e) How many of your friends think kids your age should go on dates?; and (f) How many of your friends spend time alone with a boy or girl they like? Possible responses were based on a 6-point Likert scale with responses ranging from "all or almost all" to "none." Higher scores indicate peer norms favoring pre-sexual activity.

3. Parents' Standards ---Participants were presented with six statements about their perception of their parents' standards with regards to pre-sexual activities: (a) If I had a boyfriend or girlfriend now, my parents would think it is OK; (b) If I kissed on the mouth with someone I like now, my parents would think it is OK; (c) My parents think

kids my age should not have a boyfriend or girlfriend; (d) My parents think it is OK for me to go on dates at my age; (e) My parents think it is OK for me to spend time alone with a boy or girl I like; and (f) My parents would want me to wait until I am older to have a boyfriend/girlfriend. Possible responses to the statements were based on a 5-point Likert Scale ranging from "definitely true for me" to "definitely not true for me". Higher scores indicate parental standards favoring pre-sexual activity.

4. Barriers to Pre-sexual Activity ---Participants responded to four reasons for not kissing on the mouth: (a) (1) I would not let a boy/girl kiss me on the mouth because I'm too young; (b) I would not let a boy/girl kiss me on the mouth at my age because I think it is gross; (c) I would not let a boy/girl kiss me on the mouth at my age because I would feel guilty afterwards; and (d) I would not let a boy/girl kiss me on the mouth at my age because my parents would be angry. The possible response choices were "Definitely true for me", "Maybe true for me", and "Definitely not true for me". The scores ranged from 4-14. Higher scores indicate less reluctance to kissing on the mouth.

5. Influencers of Pre-sexual Activity---Participants responded to three reasons for kissing on the mouth: (a) I would kiss a boy/girl I like on the mouth now to be more popular; (b) I would kiss a boy/girl I like on the mouth now because my friends are doing so; and (c) I would kiss a boy /girl I like on the mouth now to see what it feels like. Possible response choices were "Definitely true for me", "Maybe true for me", and "Definitely not true for me". The scores ranged from 3-9. Higher scores indicate greater likelihood for kissing on the mouth.

6. Previous Experience --- Participants responded to three questions about their own activities. (a) In the past six months, how often have you been alone with someone you really like?; (b) During the past six months, how many times have you kissed on the mouth with someone you really like?; and (c) How many times have you been on a date? Possible response choices for questions 1 to 3 were “never”, “1 or 2 times”, “3 to 5 times”, and “6 or more times”. The scores ranged from 4-12. Higher scores indicate greater involvement in pre-sexual activities.

7. Behavioral Intention ---The construct of behavioral intention was measured by one variable. Subjects were presented with the statement: “Within the next year, I would like to kiss on the mouth with a boy or girl I really like”. A 3-point Likert scale was utilized with responses ranging from “definitely true for me” to “definitely not true for me”. Young adolescents who chose the response “definitely true for me” or “maybe true for me” were categorized as anticipators (N = 102) and those choosing the response “definitely not true for me” were categorized as delayers (N = 40).

Data Analysis

The data for this study was analyzed by combining the Theory of Reasoned Action constructs with The Typology of Young Adolescent Pre-sexual Experience. Table 4 provides a listing of the variables used.

Table 4
Variables Representing the Theory of Reasoned Action

Independent Variables

Attitude Toward Behavioral Intention

1. Is it OK for kids my age to kiss on the mouth with someone they really like?
2. Is it OK for kids my age to have a boyfriend/girlfriend?
3. Is it OK for kids my age to spend time alone with a boy or girl they really like?
4. Is it OK for kids my age to go on dates?
5. Is it OK for me to have boyfriend or girlfriend now?
6. I believe that girls are more popular if they have a boyfriend.
7. I believe that boys are more popular if they have a girlfriend.
8. I believe that having a boyfriend or girlfriend is okay because everyone else my age does.
9. I believe that kids my age should wait to have a boyfriend or girlfriend.
10. I believe kids my age should wait until they are older to kiss on the mouth with a boy or girl they really like.

Social Norms

11. How many of your friends have a boyfriend or girlfriend?
12. How many of your friends have kissed on the mouth with a boy or girl they really like?
13. How many of your friends think people your age should wait until they are older to kiss on the mouth with a boy or girl they like?
14. How many of your friends have been on dates?
15. How many of your friends think kids your age should go on dates?
16. How many of your friends spend time alone with a boy or girl they like?

Parents' Standards

17. If I had a boyfriend or girlfriend now, my parents would think it is OK.
18. If I kissed on the mouth with someone I like now, my parents would think it is OK.
19. My parents think kids my age should not have a boyfriend or girlfriend.
20. My parents think it is OK for me to go on dates at my age.
21. My parents think it is OK for me to spend time alone with a boy or girl I like.
22. My parents would want me to wait until I am older to have a boyfriend/girlfriend.

Barriers

23. I would not let a boy/girl kiss me on the mouth because I'm too young.
24. I would not let a boy/girl kiss me on the mouth at my age because I think it is gross.

25. I would not let a boy/girl kiss me on the mouth at my age because I would feel guilty afterwards.
26. I would not let a boy/girl kiss me on the mouth at my age because my parents would be angry

Influencers

27. I would kiss a boy/girl I like on the mouth now to be more popular.
28. I would kiss a boy/girl I like on the mouth now because my friends are doing so.
29. I would kiss a boy/girl I like on the mouth now to see what it feels like.

Previous Experience

30. In the past six months, how often have you been alone with someone you really like?
31. During the past six months, how many times have you kissed on the mouth with someone you really like?
32. How many times have you been on a date?

Dependent Variable

Behavioral Intentions

33. Within the next year, I would like to kiss on the mouth with a boy or girl I really like.

Data Reduction

To determine whether own standards, own beliefs, peer norms, and parents' standards composed distinct domains; factor analysis was used to identify underlying dimensions in the data. It was employed in this study to validate the scales by demonstrating that its constituent items load on the same factor, and to drop proposed scale items that cross-load on more than one factor. Factor analysis for items pertaining to parents' standards, peer behavior, own beliefs, and own standards were highly

correlated within a domain. The correlation across the domains was comparatively small except for items related to "own beliefs" and "own standard", which were found to have a

Table 5
Varimax rotated component loadings of the own standards, own beliefs, parents' standards, and peer norms from the Young Adolescent Health Questionnaire

	Component			
Questionnaire Items	1	2	3	4
Is it OK for kids my age to kiss on the mouth with someone they really like?	.913			
Is it OK for kids my age to have a boyfriend/girlfriend?	.811			
Is it OK for kids my age to spend time alone with a boy or girl they really like?	830			
Is it OK for kids my age to go on dates?	.791			
Is it OK for me to have boyfriend or girlfriend now?	.768			
I believe that boys are more popular if they have a girlfriend.		.779		
I believe that having a boyfriend or girlfriend is okay because everyone else my age does.		.751		
I believe that girls are more popular if they have a boyfriend.		.601		
I believe that kids my age should wait to have a boyfriend or girlfriend.		.653		
I believe kids my age should wait until they are older to kiss on the mouth with a boy or girl they really like.		.710		
If I had a boyfriend or girlfriend now, my parents would think it is OK.			.721	
If I kissed on the mouth with someone I like now, my parents would think it is OK.			.719	
My parents think kids my age should not have a boyfriend or girlfriend.			.701	
My parents think it is OK for me to go on dates at my age.			.700	
My parents think it is OK for me to spend time alone with a boy or girl I like.			.693	
My parents would want me to wait until I am older to have a boyfriend/girlfriend.			.655	
How many of your friends have a boyfriend or girlfriend?				.549
How many of your friends have been on dates?				.622
How many of your friends have kissed on the mouth with a boy or girl they really like?				.617
How many of your friends spend time alone with a boy or girl they like?				.609
How many of your friends think kids your age should go on dates?				.653
How many of your friends think people your age should wait until they are older to kiss on the mouth with a boy or girl they like?				.670
Eigenvalues	9.835	2.264	1.455	1.273
Percentage of variance accounted for	40.9%	11.4%	9.0%	6.2%
Number of test measures	5	5	6	6

Note: Factor 1= own standard, Factor 2 = own beliefs, Factor 3 = parents' standard and Factor 4= peer norms

moderate correlation. This, therefore, strongly suggests that there are four relatively independent factors accounting for most of the variance explained, and in fact, four factors were identified whose eigenvalues were greater than 1. The Varimax rotated solution is given in Table 5.

To determine the internal consistency, reliability of the 4 scales, as well as the scales for barriers, influencers, and previous experience, Cronbach alpha coefficients were calculated. Cronbach alpha is a measure of squared correlation between observed scores and true scores. Put another way, reliability is measured in terms of the ratio of true score variance to observed score variance. Alpha coefficients range from 0 to 1. A high value for Cronbach alpha indicates good internal consistency of the items in the scale (George & Mallery, 2003). George and Mallery (2003) provide the following general rules: "_ > .9 – Excellent, _ >.8 – Good, _ > .7 – Acceptable, _ > .6 – Questionable, _ > .5 – Poor, and _ < .5 – Unacceptable" (p. 231). Cronbach alphas were run on the different factors and were found to range from acceptable to excellent. Alpha for students' attitude toward pre-sexual behavior was 0.905 when both items from the 'own belief' and 'own standards' scales were included. Thus, 'own beliefs' and 'own standards' were combined to form a scale of 'own attitude.' Alpha for 'own beliefs' was 0.802 and for 'own standards', 0.896. Alpha for social norms towards pre-sexual behavior was 0.807 for peer behavior, 0.810 for parents' standard. As support for the notion that peer norms and parents' standard comprised distinct domains, alpha was found to be unacceptable when peer norms and parents' standards were combined as a single construct, with an alpha of 0.407. This 0.407 alpha is not surprising since the

combined items measure two different dimensions of social norms, and thus the Cronbach alpha is deflated. See Table 6 for a summary of the alpha coefficients.

Table 6
Cronbach Alphas

Attitude	Own Beliefs	.802
	Own Standards	.896
Combined Items		.905
Social Norm	Peer Behavior	.807
	Parents' Standards	.810
Combined Items		.407
	Barriers	.882
	Influencers	.853
	Previous Experience	.737

Research Questions

The following research questions were addressed in the current study.

1. Do attitude and social norm scores differentiate between delayers and anticipators? To answer Research Question 1, Multivariate Analysis of Variance (MANOVA) was used to examine the effects of the independent variable, (delayer vs. anticipator) on multiple dependent variables (attitudes and social norms (peer norms and parents' standards). MANOVA indicates whether there are significant differences among groups.
2. Can subgroups defined by behavioral intention status (delayer or anticipator) be differentiated by barriers and influencers? To answer question 2, (MANOVA) was conducted on the data to examine the effects of the independent variable, behavior intention status, on multiple dependent variables (barriers and influencers).

3. Can subgroups defined by behavioral intention status (delayer or anticipator) be differentiated by previous experience? To answer question 3, univariate ANOVA was conducted on the total score for previous experience.
4. Which construct (attitude, peer norm, parents' standards, barriers, influencers or previous experience) is the best predictor of behavioral intention status (delayer or anticipator)? To answer Research Question 4, logistic regression was utilized to determine which construct was the best predictor of delayer and anticipator status. Using logistic regression, several variables were regressed into another variable (George & Mallery, 2003). Odds ratio indicate which independent variables have the most effect on the dependent variables.
5. Do ethnicity and gender of the child affect intention status, attitude, peer norm, parents' standards, barriers, influencers, and previous experience? To answer 5 a series of univariate and multivariate ANOVAS were conducted.
6. Does pubertal timing for girls predict who will be anticipators and delayers? To answer Research Question 6, Chi-Square test of independence was utilized to examine if the independent variable, pubertal status, and the dependent variable, anticipator, delayer status, are related.

CHAPTER IV

Results

The purpose of this study was to explore the relationship between attitude, social norm, barriers, influencers and previous experience on young adolescents' intention to initiate pre-sexual activity. The Typology of Young Adolescent Pre-sexual Experience identified four patterns of pre-sexual behavior: delayers, anticipators, one-timers and multiples. Intention to engage in pre-sexual activity was assessed by the following statement: "Within the next year, I would like to kiss on the mouth with a boy or girl I really like". Response choices were a) definitely true for me; b) maybe true for me; and c) definitely not true for me. Students whose responses were "definitely true for me" or "maybe true for me" were categorized as anticipators and those who chose the response "definitely not true for me", were categorized as delayers. The study incorporated constructs from The Theory of Reasoned Action as it relates to the Typology of Young Adolescent Pre-sexual Experience and other factors such as pubertal status, gender, ethnicity, and behavioral intentions. Before turning to Research Questions, descriptive data concerning frequency of own behavior, peer norms and of barriers and influencers are presented.

Frequency of Own and Peer Behavior

Thirty-two percent of the students had kissed on the mouth with someone they really liked at least once, and 68% had not kissed on the mouth. Of the 32% of students who had already kissed on the mouth, two thirds had done so once and one-third, two times or

more. In total, 13 of the 142 students in the sample had kissed on the mouth more than once with someone they really liked. All of the students who had kissed on the mouth also reported anticipating kissing on the mouth with someone they really like within the next year. Eighty-five percent of the sample reported that at least one or two of their friends have a boyfriend or girlfriend, and 70% reported that some of their friends spend time alone with a boy or girl they like. Approximately half the sample reported that they have friends who have been on dates. Students were also more likely to talk with their friends than with their parents when they have questions about having a boyfriend or girlfriend, 63% and 48% respectively.

Interesting differences were found between students' reported behavior and their perception of their friends' behavior. In general, they reported less pre-sexual activities for themselves than perceived for their friends. Eighty-five percent of students reported that at least one of their friends had a boyfriend or girlfriend, compared to 54% of the sample who reported that they had a boyfriend or girlfriend. Thirty-two percent reported kissing on the mouth with someone they really like, while 68% percent reported that at least one of their friends have kissed on the mouth. Similar results were found for dating experience, with 14% of the sample reporting that they had been on dates while, 52% reported that at least one of their friends had been on a date. Table 7 presents a comparison of subjects' own behavior and the behaviors of their peers.

Table 7
Own behaviors compared to perceived peer behaviors

	Own behavior	Peer behavior
Have a boyfriend/girlfriend	54%	85%
Kissed on the mouth with a boy/girl	32%	68%
Have been on dates	14%	52%
Spent time alone with a boy/girl	60%	70%

Note: N = 142

Barriers and Influencers to Kissing on the Mouth

Students also reported reasons for not kissing on the mouth with a boy or girl they like as well as reasons for engaging in this behavior. These reasons have been categorized as barriers and influencers of the behavior. Fifty-seven percent of students reported that they would not kiss on the mouth with someone they really like because their parents would be angry. Additionally, 43% of students reported that they would kiss on the mouth to be more popular and because they think their friends are doing so. Interestingly, while 57% reported that their parents would be angry if they kissed on the mouth, 71.8% of the overall sample has been categorized as anticipators. Table 8 provides an outline of the reasons for kissing on the mouth and for not kissing on the mouth.

Table 8
Barriers and Influencers Related to Kissing on the Mouth

Reasons for not kissing on the mouth Barriers		Reasons for kissing on the mouth Influencers	
Too young	37%	To be more popular	43%
Because it's gross	31%	Because my friend are doing so	43%
Would feel guilty afterwards	32%	To see what it feels like	33%
Parents would be angry	57%		

Research Question 1

Research question 1 asked if subgroups defined by behavioral intention status (anticipator, delayer) could be differentiated by attitude and social norms. Multivariate Analysis of Variance (MANOVA) was conducted on the data to examine the effects of the dependent variable behavior intention status with two levels (delayer or anticipator) on multiple independent variables (attitude and norm scores (peer behavior and parents' standards)). Sample sizes, case means and standard deviations for the comparison of attitudes and social norms of these two groups are presented in Table 9.

As shown in Table 9, anticipators had attitudes more favorable to anticipating pre-sexual activities and reported more favorable peer norms than delayers, but parents' standards were comparable.

Table 9

Cases, Means, and Standard Deviation for Attitudes and Social Norms of Delayers and Anticipators

	Attitude			Peer Norm			Parents' Standard		
Students	N	M	SD	N	M	SD	N	M	SD
Delayer	40	19.03	6.55	40	12.30	5.26	40	23.30	5.55
Anticipator	102	28.72	7.58	102	18.35	5.72	102	22.69	4.54

Wilks' Lambda indicated a significant effect for behavioral intention status $F(3,138) = 25.37$, $p = .000$. This warranted further analysis to explore where group effects existed for attitude, peer norm and parents' standard scores. Follow-up univariate ANOVAs indicated that there was a significant difference on mean attitude scores among anticipators and delayers $F(1,140) = 50.52$, $p = .000$ (see Table 10). There was also a

significant difference among anticipators and delayers on peer norm scores F(1,140) = 33.53, p = .000. No significant differences were found among delayers and anticipators on parents' standards scores F(1,140) = .425, p >.05 Thus, there was evidence that attitude and peer norm scores were distinguished by behavioral intention status. Parents' standard scores were not distinguished by behavioral intention status.

Table 10
Between-group Main Effects

Behavior Intention Status by Attitudes	F(1,140) = 50.52*, p = .000
Behavior Intention Status by Peer norms	F(1,140) = 33.53*, p = .000
Behavior Intention Status by Parents' Standards	F(1,140) = .425, p = .000

Research Question 2

Research question 2 asked if barrier and influencer scores differ by behavioral intention status (delayer and anticipator). Multivariate Analysis of Variance (MANOVA) was conducted on the data to examine the effects of the independent variable behavioral intention status with two levels (delayer or anticipator) on multiple dependent variables (barriers and influencer scores). Sample sizes, case means and standard deviations for the comparison of barriers and influencers of these two groups are presented in table 11.

As shown, anticipators responded more positively to influencers than delayers, and more negatively to barriers. Wilks' Lambda indicated a significant effect for behavioral intention status F(2,139) = 39.89, p= .000. Follow-up univariate ANOVAs

revealed that anticipators and delayers had significantly different mean barrier F(1,140) =10.39, p=.002, and influencer scores F(1,140) = 79.04, p = .000.

Table 11
Cases, Means and Standard Deviation for Barriers and Influencers of Delayers and Anticipator

	Barriers			Influencers		
Students	N	M	SD	N	M	SD
Delayers	40	6.43	2.04	40	3.56	1.10
Anticipators	102	9.03	1.71	102	7.31	1.81
Note:	Barrier scores ranged from 4-14, with larger scores indicating inclination to be anticipators. Influencer scores ranged from 3-9.					

Research Question 3

Research question 3 asked if previous experience differentiate behavioral intention status. The sum of three items from the category "your activities" was used to answer this question. A chi-square test of independence was calculated comparing students' previous experience to self-reported behavioral intention status. A significant interaction was found (chi-square (13) = 34.22, p = 0.001. Individuals classified as anticipators were more likely to have reported that they had been involved in pre-sexual activities (73.8%) than those classified as delayers (62.1%). Students who had already kissed on the mouth were more likely to anticipate kissing on the mouth within the year (89.1%) than students who had not kissed on the mouth (66.4%). Univariate ANOVA supports these findings indicating that behavioral intention status was significantly influenced by previous experience F(1,142) = 4.300, p = 0.000.

Research Question 4

Research question 4 asked which construct was the best predictor of behavioral intention status. Logistic regression was used to determine which construct (attitude, peer behavior, or parents' standard) in the modified Theory of Reasoned Action model was the best predictor of behavioral intention status (anticipators, delayers). In logistic regression several variables are regressed to another variable (George & Mallery, 2003). A single categorical predictor (attitude, peer behavior, parents' standard norms) is broken up into a series of variables. Behavioral intention status was assessed by larger attitude scores indicating greater preference for anticipating pre-sexual behavior and larger social norms scores indicating more perceived pressure to engage in pre-sexual activity. Anticipators were more likely to score in the high range of attitude (35-49), social norm (parents' standard 22-30, peer norm 26-36), barriers (8-12), influencers (5-9), and previous experience (8-12).

Attitudes, peer norm, parents' standards, influencers, and own behavior were found to be significant predictors of behavior intention status. Barrier was not a significant predictor of behavioral intention status. Beta coefficients were used to gauge the magnitude of influence a particular independent variable had on the dependent variable (George & Mallery, 2003). As indicated in figure 4, betas were statistically significant for attitude (B = 0.148, p = 0.020), parents' standard (B = 0.225, p = 0.009), peer norm (B = 0 157, p =0 .021), influencers (B = .910, p =0 .000), previous behavior (B = -.479, p = 0.025) but not for barriers. Previous behavior was inversely correlated with behavioral intention status. Influencer was the strongest predictor of behavioral intention status,

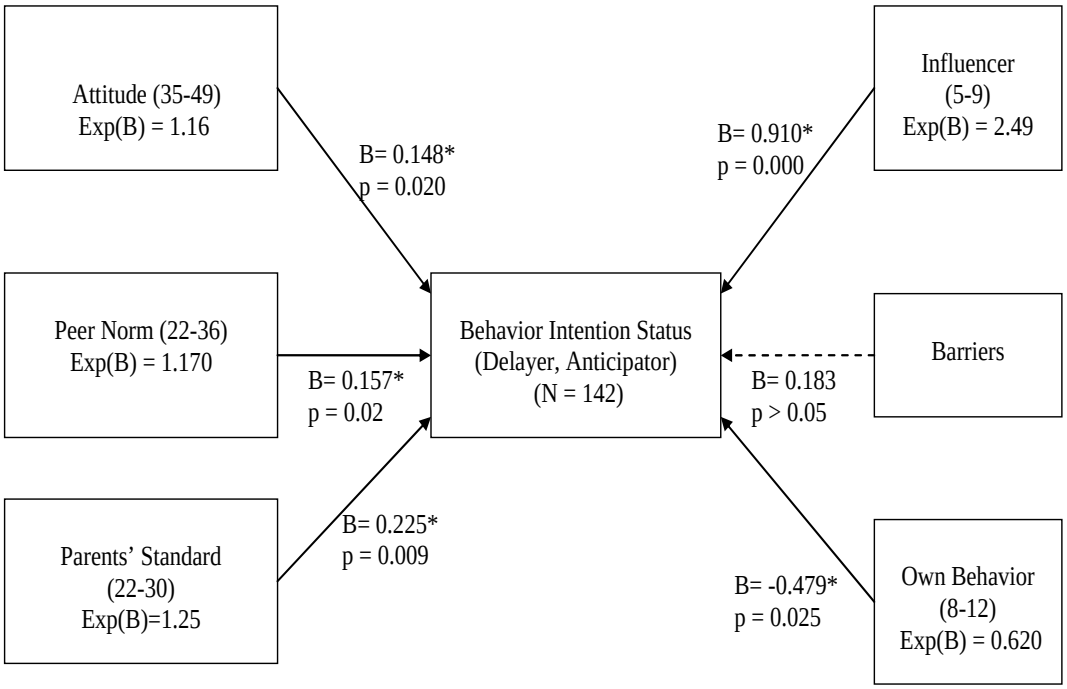

Figure 4: Prediction of Behavioral Intention Status based on Theoretical Constructs

followed by parents' standards, peer behavior and attitude, in that order. Attitudes and peer behavior were almost equally likely to predict behavioral intention status. Odds ratios supported the findings that influencers had the greatest impact on who were classified as delayers and anticipators with an odds ratio of 2.485, followed by parents' standards (1.252) and peer behavior (1.170). The assessment of which variable was the best predictor of behavioral intention status focused on comparison of the likely values of odds ratio in the population. These findings may be sample specific and may not hold in the general population.

Research Question 5

Research Question 5 asked whether ethnicity or gender of student differentiated behavioral intentions (delayers and anticipators), attitude, peer norm, parents' standards, barriers, influencers, and previous experience. Univariate and multivariate ANOVAs were conducted on the data to examine the effects of the independent variables (ethnicity and gender) on multiple dependent variables (delayers/anticipator, attitude, peer norm, parents' standards, barriers, influencers, and previous experience).

Examination of the descriptive data indicates that there are some differences among the groups (see Table 14). Given that the number of subjects in each group is relatively small, representative mean scores and standard deviation are described but should be interpreted with caution. This research question was addressed in 4 parts, each part examining the influence of gender and ethnicity on a particular construct or group of constructs. Table 16 provides a summary of results for all sections of question 5.

a. Does ethnicity or gender affect behavioral intention status? Tables 12 and 13 provide a classification of delayers and anticipators by ethnicity and gender. Univariate ANOVA was calculated examining the influence of gender and ethnicity on behavioral intention status. The main effect for gender was not significant ($F(1,127) = .000$, $p > .05$). The main effect for ethnicity was also not significant $F(2,127) = .076$, $p > .05$ In addition, the interaction of gender and ethnicity was also not significant ($F(2,127) = 2.206$, $p > .05$). It appears that neither gender nor ethnicity had any significant effect on whether students were categorized as delayers or anticipators.

Table 12
Classification of Delayers and Anticipators by Gender

	Gender		
	Boys	Girls	Total
Delayers	(N = 18) 32%	(N = 22) 26%	(N = 40) 28.2%
Anticipators	(N = 38) 68%	(N = 64) 74%	(N =102) 71.8%
Total	(N = 56) 100%	(N = 86) 100%	(N = 142) 100.0%

Table 13
Classification of Delayers and Anticipators by Ethnicity

	Ethnicity			
	Hispanics	African Americans	Caucasians	Total
Delayers	(N = 11) 28%	(N = 11) 24%	(N = 12) 24%	(N = 34) 25.6%
Anticipators	(N = 28) 72%	(N = 34) 76%	(N = 37) 76%	(N = 99) 74.4%
Total	(N = 39)	(N = 45)	(N = 49)	(N = 133)

b. Does ethnicity or gender affect previous experience, peer norm, or parents' standards? A one-way multivariate ANOVA was calculated examining the effect of gender and ethnicity on previous behavior, peer norm, and parents' standards. No significant effect was found for gender (Lambda(3,125) = 1.517, $p > .05$) or ethnicity (Lambda(6,250) = 1.202, $p > .05$). The gender by ethnicity interaction was also not significant (Lambda(6,250) = .930, $p > .05$). Therefore, neither gender nor ethnicity had any significant effect on peer norms, parents' standard or previous behavior.

c. Does ethnicity or gender affect the attitude scores? Univariate ANOVAs indicated that attitude scores were not significantly influenced by ethnicity ($F(2,127) = .434$, $p = .649$) nor by gender ($F(1,127) = 1.392$, $p=.240$). The two-way interaction effect of gender by ethnicity had a significant effect on attitude scores ($F(2,127) = 3.75^*$, $p = .026$). Post hoc multiple comparison tests for

ethnicity revealed no significant differences in the pair-wise comparisons.

Overall, neither gender nor ethnicity had a significant impact on attitude scores.

Table 14

Cases, Means, and Standard Deviations of Dependent Variables for Delayers and Anticipators by Gender and Ethnicity

Dependent Variables		Males								
		Hispanic			African American			Caucasian		
		N	M	SD	N	M	SD	N	M	SD
Attitude	Delayer	2	17.50	5.4	4	18.00	4.2	7	21.43	7.3
	Anticipators	10	32.30	4.9	15	28.27	5.2	11	30.27	6.2
Pee7r Behavior	Delayer	2	9.00	2.8	4	11.25	3.5	7	14.51	6.2
	Anticipators	10	19.11	5.5	11	18.60	3.9	15	17.90	4.6
Parents' Standards	Delayer	2	24.50	2.4	4	22.00	6.5	7	19.00	7.1
	Anticipators	10	21.50	2.7	15	22.67	4.5	11	21.67	4.5
Barriers	Delayer	2	8.00	0.0	4	8.25	3.40	7	7.4	3.43
	Anticipators	10	9.70	1.49	15	7.86	2.59	11	8.36	2.34
Influencers	Delayer	2	4.50	0.7	4	3.50	0.578	7	3.00	0.00
	Anticipators	10	6.90	2.18	15	6.27	1.83	11	6.27	1.90
Previous Behavior	Delayer	2	3.00	0.00	4	4.00	0.81	7	4.43	2.41
	Anticipators	10	6.10	1.79	15	5.87	3.18	11	4.90	1.57

Dependent Variables		Females								
		Hispanic			African American			Caucasian		
		N	M	SD	N	M	SD	N	M	SD
Attitude	Delayer	9	19.11	5.1	7	21.74	4.7	5	15.20	5.1
	Anticipators	18	23.50	5.8	19	29.32	6.7	26	31.00	5.8
Peer Behavior	Delayer	9	11.11	2.3	7	14.43	5.0	5	11.80	2.6
	Anticipators	18	16.25	4.3	19	18.12	5.2	19	22.00	4.7
Parents' Standards	Delayer	9	24.22	2.6	7	23.57	3.8	5	26.60	3.2
	Anticipators	18	24.83	4.5	19	23.50	3.91	26	21.58	2.6
Barriers	Delayer	9	6.3	3.13	7	5.59	2.63	5	5.80	2.49
	Anticipators	18	6.88	3.16	19	7.63	2.58	26	8.53	1.98
Influencers	Delayer	9	3.33	0.50	7	4.85	1.95	5	3.00	0.00
	Anticipators	18	5.55	1.94	19	6.36	1.42	26	6.76	1.73
Previous Behavior	Delayer	9	3.11	0.33	7	5.28	2.30	5	3.80	1.73
	Anticipators	18	4.67	1.97	19	5.42	1.91	26	5.77	1.79

Low attitude scores indicate a preference delaying pre-sexual activity.
Larger peer behavior scores indicated greater perceived pressure to engage in pre-sexual activity.
Larger parental standard scores indicated less perceived parental support to delay pre-sexual activity.

d. Does ethnicity or gender of student affect scores on barrier and influencer measures? The descriptive data presented in Table 15 indicate that there are

differences among the groups. Multivariate analysis of variance was conducted on the data to examine the effects of independent variables (gender and ethnicity) on dependent variables (barriers and influencers). Wilks' Lambda revealed that the main effect for gender was not significant ($F(2,126) = 2.76$, $p = .067$). The main effect for ethnicity was also not significant ($F(4,254) = .466$, $p = .760$). Wilks' Lambda indicated that the two-way interaction of gender by ethnicity was significant ($F(4,254) = 3.064^*$, $p = .017$).

The gender by ethnicity interaction warranted further investigation to determine how these factors impacted mean barrier and influencer scores. Follow-up ANOVAs revealed a significant effect for the two-way interaction of gender by ethnicity for influencer scores ($F(2,127) = 5.100^*$, $p = .007$), while barrier scores approached significance ($F(2,127) = 2.910$, $p = .058$). Hispanic males had the highest mean influencer score ($M = 6.50$, $SD = 2.1$) while Hispanic females had the lowest mean influencer score ($M = 4.78$, $SD = 1.90$).

Table 15
Cases, Means, and Standard Deviations of Influencers and Barriers by Ethnicity and Gender

Dependent Variables		Ethnicity											
		Hispanic			African American			Caucasian			Total		
	Gender	N	M	SD	N	M	SD	N	M	SD	N	M	SD
Influencers	Boys	12	6.50	2.20	19	5.68	2.00	18	5.00	2.20	49	5.63	2.16
	Girls	27	4.78	1.91	26	5.96	1.69	31	6.16	2.12	84	5.66	2.00
	Total	39	5.31	2.13	45	5.84	1.81	49	5.72	2.20	133	5.65	2.05
Barriers	Boys	12	9.42	1.51	19	7.95	2.68	18	7.89	2.78	49	8.29	2.53
	Girls	27	6.70	3.10	26	7.08	2.71	31	8.10	2.44	84	7.33	2.78
	Total	39	7.54	2.97	45	7.44	2.70	49	8.02	2.55	133	7.68	2.72

Notes: Larger influencer scores indicated a preference for engaging in pre-sexual activity.
Larger barrier scores indicated a preference for engaging in pre-sexual activity.

Table 16
Summary of Results for Research Question 5

Question 5(a) Does ethnicity or gender affect behavioral intention status?		
Main Effects	Gender	F(1,127) = .000, p > .05
	Ethnicity	F(2,127) = .076, p > .05
Two-way	Gender by Ethnicity	F(2,127) = 2.206, p > .05
Question 5(b) Does ethnicity or gender affect previous experience, peer norm, or parents' standards?		
Main Effects	Gender	F(3,125) = 1.517, p > .05
	Ethnicity	F(6,250) = 1.202, p > .05
Two-way	Gender by Ethnicity	F(6,250) = .930, p > .05
Question 5(c) Does ethnicity and gender affect attitude scores?		
Main Effects	Gender	F(1,127) = 1.392, p > .05
	Ethnicity	F(2,127) = .434, p > .05
Two-way	Gender by Ethnicity	F(2,127) = 3.750*, p = .026
Question 5(d) Does ethnicity and gender of student affect scores on barrier and influencer measures?		
Main Effects	Gender	F(2,126) = 2.76, p = .067
	Ethnicity	F(4,254) = .466, p = .760
Two-way	Gender by Ethnicity	F(4,254) = 3.064*, p = .017
Between-group effects		
Influencer	Gender by ethnicity	F(2,127) = 5.100*, p = .007
Barrier	Gender by ethnicity	F(2, 127) = 2.910, p = .058

Research Question 6

Research question 6 asked if pubertal timing for girls predict who will be anticipators and delayers. Chi-squared test of independence was used to tests whether or not pubertal timing for girls was independent of behavioral intention status. A significant interaction was found (Chi-square (3) = 10.83, p = 0.01). Females who had experienced their first menstrual period were more likely to anticipate engaging in pre-sexual activity (93.8%)

than females who had not experienced their first menstrual period (65.9%). Females who reported that they were not sure if they had experienced their first menstrual period were more likely to be anticipators (53.8%) than delayers (46.2%).

Summary of Findings

Research question 1 asked if subgroups defined by behavioral intention status (anticipator, delayer) differ by attitude and social norms. Multivariate analysis determined a significant difference in the mean attitude scores among anticipators and delayers, indicating that the attitudes of delayers are quite different from the attitudes of young adolescents anticipating pre-sexual activity. The peer norms of anticipators were also different from those of delayers.

Research question 2 asked if barrier and influencer scores differ by behavioral intention status. Multivariate analysis of variance determined that delayers were more likely to self-report that they would not kiss on the mouth due to the barriers. For example, they would be more likely to respond in the affirmative that they would not kiss on the mouth because it would make their parents angry, than would anticipators. Anticipators had a higher mean influencer score than delayers, indicating that these items had a greater impact on their classification as anticipators than it did for delayers.

Research question 3 asked if previous experience differentiates behavioral intention status. Students who reported they had previous pre-sexual experience, such as

having a boyfriend or girlfriend or spent time alone with someone they liked, were more likely to anticipate kissing on the mouth.

Research question 4 asked which construct modified from the Theory of Reasoned Action (attitude, peer norm, parents' standards, barriers, influencers, or previous experience) was the best predictor of behavioral intention status. Logistic regression was used to determine which construct was the best predictor. Influencers were the strongest predictor of whether students will be classified as delayers or anticipators, followed by parents' standards and peer norms.

Research question 5 asked if gender and ethnicity differentiated between behavioral intention status (anticipators and delayers), attitude, peer norms, parents' standards, barriers, influencers, and previous experience. Multivariate analysis that examined main effects and interactions determined that neither gender nor ethnicity had a significant influence on students' classification as delayers or anticipators. Ethnicity and gender did not significantly influence previous experience, peer norms, or parents' standards. Additionally, students' attitudes were not significantly influenced by ethnicity or gender. Barriers and influencers were not found to be significantly influenced by gender and ethnicity. Thus, neither gender nor ethnicity had any significant impact on students' intention to delay or initiate pre-sexual activity.

Research question 6 asked if pubertal timing for girls predict who will be classified as anticipators and delayers. Females who had experienced their first menstrual period were more likely to be classified as anticipators than those females who had not had a menstrual period.

Chapter V

A primary purpose of this study was to utilize the Young Adolescent Health Questionnaire to determine whether attitude measures and social norm measures distinguish between students classified as delayers and anticipators. The study was also used to determine whether measures of barriers, influencers, and previous experience affect intention to engage in pre-sexual activity. Further examination was carried out in order to determine which of the six measures, (attitudes, peer norms, parents' standards, barriers, influencers, or previous experience) was the stronger predictor of behavioral intention status. The impact of ethnicity on all predictors was also examined. Finally, pubertal timing for girls was examined as a possible predictor of behavioral intention status. This chapter is divided into four sections: (1) a summary of procedures, (2) summary of findings (3) discussion and implications, and (4) recommendations for future research.

Summary of Procedures

The subjects included in this study were elementary school children ages 9 to 11, enrolled in an after-school program. The average age of the students was approximately 10.2 years, with 61% females, and 39% males. The sample was ethnically diverse with 34% Caucasians, 32% African Americans, and 27% Hispanics. The Young Adolescent Health Questionnaire, located in Appendix A, examined young adolescents' attitudes, social norms, intentions, and behavior related to pre-sexual activity. Students responded by circling the letter next to the response choice for each question.

The theoretical constructs within The Theory of Reasoned Action (Ajzen & Fishbein, 1980) and behavior patterns The Typology of Young Adolescent Pre-sexual Experience were measured from variables within the Young Adolescent Health Questionnaire. Modified constructs from The Theory of Reasoned Action included attitude and social norms towards pre-sexual activity. The theoretical construct of intention from The Theory of Reasoned Action was used to distinguish behavior patterns in the typology. The Typology of Young Adolescent Pre-sexual Experience identified individuals who would like to kiss on the mouth with a boy or girl they really like within the next year and placed them in the group categorized as anticipators. Individuals who responded that they would not like to kiss on the mouth with a boy or girl they like within the next year were classified as delayers. Research questions in this study examined adolescents' attitudes and social norms towards pre-sexual activity as well as barriers, influencers, and previous experience to distinguish differences among adolescents categorized as anticipators and delayers.

Summary of Findings

The following findings from this study are based on the limitations discussed in Chapter 1.

1. Attitude and peer behavior scores differed based on behavioral intention status. Anticipators indicated greater preference for engaging in pre-sexual activities than delayers. Anticipators also perceived greater pressure from peers to engage in pre-sexual activities than did delayers.

2. Behavioral intention status (delayer, anticipator) distinguished barrier and influencer scores. Students who scored in the high range on the influencer measure were more likely to be classified as anticipators. On the other hand, students who scored in the low range on the barrier measure were more likely to be classified as delayers while those scoring in the high range as anticipators.
3. Students who had previous experiences were more likely to be anticipators than delayers.
4. Influencers had the strongest impact on students' classification as delayers or anticipators, followed by parents' standards and peer behavior.
5. Overall, neither gender nor ethnicity had a significant impact on the classification of students as delayers or anticipators.
6. Pubertal timing for girls was found to be a predictor of behavioral intention status. Girls who had experienced their first menstrual period were more likely to report that they anticipate kissing on the mouth with a boy or girl they like within the next year than girls who had not had a menstrual period.

Discussion and Implications

Ethnographic research and multi-level analysis have shown the importance of contextual factors in determining adolescent sexual behavior (Brooks-Gunn et al 1993; Fox & Inazu, 1986; Jessor & Jessor, 1975; Kinsman, et al., 1997; Newcomer & Udry,

1984; Perkins, et al., 1998; Whitaker, Miller & Clark, 2000). Adolescent sexual behavior and subsequent negative outcomes (e.g. pregnancy and diseases) do not occur in a vacuum but instead, multiple layers of influence shape and define choices and activities. Most of the literature that examined these layers of influence on adolescent sexual behavior focused on the role of neighborhood, family and peers. This research extends previous work in a number of ways. First, it examined the role of attitudes, parents' standards, perceived peer norms, barriers, influencers, and previous experience on behavioral intentions. Secondly, it examined younger adolescents (age 9-11), a segment of the population that had not been previously studied. Finally, the young adolescents in this study represented three major ethnic groups.

This study adds to the understanding of the characteristics of young adolescents and their intentions towards pre-sexual behavior that is currently absent from the literature. The Theory of Reasoned Action combined with the Typology of Young Adolescent Pre-sexual Experience creates a framework that allows for the examination of patterns of behavior and intentions. This profile included individual's attitudes and social norms towards initiating pre-sexual activity. This approach provides a scientific and valid methodology for studying adolescents' behavioral intentions.

An important aspect of this study was the use of a younger population with an average age of 10.2 years. Previous studies have focused on adolescents over the age of 12, while ignoring a segment of population that is vulnerable to the effects of sexual activities. Lessons learned from this younger population of adolescents can be incorporated into health education programs aimed at attempting to delay the onset of

sexual activity in youth. These programs would target young adolescents who have not yet initiated sexual activity but may have intentions to do so or may be at risk due to the influence of peers and other risk factors. By utilizing The Typology of Young Adolescent Pre-sexual Experience to examine those who intend to initiate pre-sexual activity programs can be designed with elements geared towards populations at greatest risk. Students classified as anticipators are at highest risk for initiating pre-sexual activities.

This study contributes to the body of knowledge regarding young adolescents' anticipation of initiating pre-sexual activity by highlighting the fact that anticipators at this age (9 – 11 years old) have attitudes and norms favorable to initiating pre-sexual activity. Anticipators also have social norms that influence their intentions to initiate pre-sexual activity to a greater degree than those students categorized as delayers. This is supported by the literature for sexually inactive adolescents. In a 1997 study, Serovich and Greene found that in general, attitudes and social norms influence adolescents' behavior intentions.

The current study found that anticipators had norms and attitudes that exert more pressure to initiate pre-sexual activity than those students whose intention it was to delay these activities. This is an important finding which supports previous work with older adolescents indicating that attitudes and peer norms favoring sexual behavior place adolescents at risk for engaging in these activities (Brucker & Bearman, 1999). Anticipators in this study therefore fit the profile of individuals at high risk for engaging in sexual activity. Adolescents classified as delayers had attitudes and social norms that favored delaying the initiation of pre-sexual activity. Based on their measure of attitudes,

social norms, and intentions, these students would not be at high risks for initiating sexual activity. This distinction is crucial in the development of effective prevention programs. In order to address the health needs of adolescents, prevention programs must address those issues that support young adolescents' attitudes that favor initiating sexual activity. Students must be made to understand for example, that their perception of their friends' level of sexual activity may be inaccurate. They need to understand that while young adolescent sexual activity is a problem, only a small percentage of younger adolescents are sexually active. Additionally, they need to understand that the outcome for sexually active young adolescents may have severe consequences.

This study also examined attitudes, peer norms, parents' standards, barriers, influencers, and previous experience to determine which construct was more effective in predicting behavioral intention status. It was found that influencer was the strongest predictor of behavioral intention status. Additionally, parents' standards and barriers were found to be strong predictors. Earlier studies provide some support for these findings. In one study social norms were found to be the stronger predictor of behavioral intention (George, Hale & Rubin, 1997). Parents' standards were included in the measure of social norm used in current study. This study therefore confirms at least one component of social norm (parents' standards) as a major predictor of behavioral intention in young adolescents.

Research regarding the social norms, attitudes and behavioral intention of adolescents in general suggests that attitudes are a better predictor of behavioral intention than social norms (Serovich & Green, 1997). This conflict with the findings of this study

and may be due to the lower age of the students in this study. The average age was 10.2 years which is about two years younger than the sample used in the Serovich and Green (1997) study. This older sample represents middle school students who are quite different developmentally and may therefore respond in ways that are different from younger students. Social pressure has been found to be particularly significant for adolescents during the middle school years (Elias, Garza, & Ubriaco, 1985; Rutter, 1980). Their reaction to social pressures and other influences affects their own beliefs and attitudes which may be an explanation for the greater impact of attitudes on behavioral intention for older students.

The influencer measure used to assess the impact of items believed to encourage the initiation of sexual activity has a strong social component because of the inclusion of two items related to peer behavior. This may explain why it was found to be such a strong predictor of students' behavioral intention status. One item from the barrier measure was also related to parents' attitude towards their children's sexual activity. These factors may provide some explanation for the effect of both influencers and barriers being such strong predictors of behavioral intention status. Adolescents while still being impacted by their peers at this younger age also perceive parents as an important social influence. These results therefore suggest that young adolescents may be involved in an emotional struggle as they attempt to reconcile with their perception of their peers' behavior and the standards of their parents. These young individuals are still at a stage in their development where peer influence may not be having its greatest impact due to the strong role still being played by parents. Effective intervention

programs should target young individuals before they get to middle school age when the pressure to fit in with their peers is at a high level. Students should be taught the skills needed to deal with the real and perceived pressure adolescents feel with regards to engaging in sexual activity.

An important finding of this study was the impact of pubertal timing on intentions to engage in pre-sexual activity. As was expected, older girls were more likely to have experienced their first menstrual period and were also more likely to be classified as anticipators than were younger girls. This classification based on their measures of attitudes and social norms as well as their stated intentions to kiss on the mouth within next the year, place them at high risk for pre-sexual involvement. What is even more interesting however, is the fact that there is a portion of girls who indicated that they were not sure if they had had their first menstrual period, but who were also classified as anticipators. One could argue that these young girls are at great risk for engaging in sexual activity due to their lack of understanding of their own physical and sexual development.

This study highlights the fact that children are thinking about pre-sexual activities as well as anticipating pre-sexual involvement at very early ages. Many of these children are not fully aware of their own sexual development and how to effectively handle the various pressures they perceive with regards to sexual activity.

An important feature of this study was the use of an ethnically diverse sample. This sample allowed for the examination of the various predictors with attention being paid to the role of ethnicity. Interestingly, ethnicity was not found to have had a significant

impact on attitudes, peer norms or parents' standards (social norms). Additionally, an ethnic profile on group membership (anticipator, delayer) was not identified. With the decrease in the age of initiation of sexual activity for all three ethnic groups (Terry-Humen & Manlove, 2003), adolescent abstinence programs must target all young people believed to be at risk. Special attention must be paid to younger adolescents who have the intention to engage in pre-sexual activity but may simply be waiting for the opportunity to do so, regardless of their ethnic classification.

It is important to determine the multitude of influences on sexual behavior so that interventions can address the health needs of adolescents. Since one quarter of all HIV cases affect adolescents (CDC, 2001) and the United States has the highest teen pregnancy rate in industrialized nations (Kirby, 2001), understanding the antecedents of adolescent sexual risk-taking is of great importance. The unfortunate reality however, is that current behavior change interventions do not have a successful long-term tract record (Kirby, 2001). Perhaps one reason many program are unsuccessful is that most health behavior change programs focus on individual attributes only (Stokols, 1996). The focus of these interventions is to change individual attributes such as knowledge, attitudes and efficacy. This focus on individual attributes implies that lifestyle behavior choices are strictly a matter of free individual choice and it neglects important social constraints that may influence these choices. There is no doubt that individual choice plays a major role in behavioral decisions, but ignoring the influence of social factors will hamper the effectiveness of intervention programs. Kirby (2001) suggests that in order to successfully address adolescent sexual behavior, interventions must go beyond simply

teaching skills and presenting information to individual adolescents. He suggests that interventions must address the importance of context as defined by peers, parents, school, and the community in order to be more effective.

Finally, this sample was representative of adolescents in grades 4 and 5 that were in an after-school program (held in each school) whose parents had consented for their participation. There are some concerns that this sample may represent a particular segment of the population by the simple fact they are in an after-school program. On the other hand, after-school care has become an important reality for many American families. The National Center for Education Statistics reports that at least 2.5 million students in grades K-8 are enrolled in before- and after-school programs, which are offered in at least 30 percent of public schools and 50 percent of private schools nationwide. This fact provides strong support for generalizing beyond this population of students. However, since the information is self-reported, which increases the possibility for inconsistencies and inaccuracies, caution should be used in generalizing these findings.

Recommendations for Further Study

There are a number of ways to extend this research. One way is to simultaneously consider other contextual factors such as family composition and school environment and their influence on young adolescent pre-sexual behavior and whether the inclusion of these contexts modify the effects of parents or peers. Although parents and peers are the most important social influences in an adolescents' life, other social forces may also

influence their sexual behavior. It is important to investigate the effect of media on pre-sexual and sexual behavior. The kind of music adolescents listen to and the type of TV programs they watch may provide valuable insights to their proneness to risk. Another way to extend this study is by replication of the study using other populations (e.g. a more rural population, students from the general student body population) which could also prove quite beneficial in order to determine whether similar profiles exist with other adolescent populations. Additionally, this research may be extended by conducting a longitudinal study examining the factors explored in this study with at least two or three data points. This will allow for an examination of the transition of adolescents to levels of higher sexual risk over time. In addition, further work should utilize a larger sample size that would allow improved comparisons of subgroups. Finally, and most importantly, an extension of this work is incorporating the findings into intervention programs that consider multiple contexts as well as addressing the needs of younger adolescents.

Conclusions

A number of conclusions emerge from this research. First, these findings show that in order to understand young adolescent pre-sexual behavior, multiple factors must be considered. Since attitudes, peer norms, parents' standards, barriers, influencers, and previous behavior all played a role in predicting behavioral intention, they should be included in intervention programs in addition to individual instruction. Second, this study demonstrates that even as young as 9 years old, adolescents are thinking about and desiring to be involved in pre-sexual activities. It is important that this information be

included in comprehensive prevention programs aimed at addressing the health needs of all adolescents.

Appendix A

YOUNG ADOLESCENT HEALTH QUESTIONNIARE

Instructions: Read each question carefully. Select your answers by circling the letter next to the response. Mark one answer for each question.

WHAT PEOPLE YOUR AGE THINK AND DO

The following statements are about your FRIENDS and what they think and do. If you are not sure, mark the answer that you think best describes what they think and do.

1. How many of your friends have a boyfriend or girlfriend?

   A. All or almost all
   B. Many of them
   C. Some of them
   D. Only a few
   E. One or two
   F. None

2. How many of your friends have kissed on the mouth with a boy or girl they really like?

   A. All or almost all
   B. Many of them
   C. Some of them
   D. Only a few
   E. One or two
   F. None

3. How many of your friends think people our age should wait until they are older to kiss on the mouth with a boy or girl they like?

   A. All or almost all
   B. Many of them
   C. Some of them
   D. Only a few
   E. One or two
   F. None

4. When I have questions about having a boyfriend or girlfriend, I talk with my friends.

   A. Very often
   B. Sometimes
   C. Rarely
   D. Never

5. How many of my friends have been on dates?

   A. All or almost all
   B. Many of them
   C. Some of them
   D. Only a few
   E. One or two
   F. None

6. How many of your friends think kids our age should go on dates?

   A. All or almost all
   B. Many of them
   C. Some of them
   D. Only a few
   E. One or two
   F. None

7. How many of your friends spend time alone (like spending most of their free time at school or after school) with a boy or girl they like?

   A. All or almost all
   B. Many of them
   C. Some of them
   D. Only a few
   E. One or two
   F. None

WHAT YOUR PARENTS THINK

The following statements are about how your parents (the parent(s) that you live with most of the time) feel about your activities and the activities of kids your age.

8. If I had a boyfriend or girlfriend now, my parents would think it is OK?

   A. Definitely true
   B. True
   C. Maybe true
   D. Not true
   E. Definitely not true

9. If I kissed on the mouth with someone I like now, my parents would think it is OK.

   A. Definitely true
   B. True
   C. Maybe true
   D. Not true
   E. Definitely not true

10. My parents think kids my age should not have a boyfriend or girlfriend.

    A. Definitely true
    B. True
    C. Maybe true
    D. Not true
    E. Definitely not true

11. My parents think it is OK for me to go on dates at my age.

    A. Definitely true
    B. True
    C. Maybe true
    D. Not true
    E. Definitely not true

12. My parents think it is OK for me to spend time alone with a boy or girl I like.

    A. Definitely true
    B. True
    C. Maybe true
    D. Not true
    E. Definitely not true

13. My parents would want me to wait until I am older to have a boyfriend or girlfriend.

    A. Definitely true
    B. True
    C. Maybe true
    D. Not true
    E. Definitely not true

14. When you have questions about having a having a boyfriend or girlfriend, do you talk with your parent(s)?

    A. Definitely true
    B. True
    C. Maybe true
    D. Not true
    E. Definitely not true

YOUR ACTIVITIES

Now I am going to ask you about your own activities. Choose the answer that best fits your own activities.

Someone you really like refers to a boy or girl who is your boyfriend or girlfriend, or someone who could be, or who you would like to be your boyfriend or girlfriend.

15. In the Past 6 Months, how often have you been alone with someone you really like?

    E. Never
    F. Once
    G. 2 to 4 times
    H. 5 or more times

16. During the Past 6 Months, how many times have you kissed on the mouth with someone you really like?
    A. Never
    B. Once
    C. 2 to 4 times
    D. 5 or more times

17. How many times have you been on a date?

    A. Never
    B. Once
    C. 2 to 4 times
    D. 5 or more times

18. How old was your oldest boyfriend or girlfriend?

    A. I've never had a boyfriend or girlfriend
    B. 10 years old or younger
    C. 11 years old
    D. 12 years old or older

19. How old were you when you first kissed on the mouth with someone you really like?

    A. I have never kissed on the mouth
    B. 9 years or younger
    C. 10 years old
    D. 11 years old
    E. 12 years old

20. If you are a girl, have you had your first menstrual period?

    A. Yes
    B. No
    C. Not sure
    D. I'm a boy

IS IT OK?

Circle the number that best fits your answer.

	Definitely Not OK	Probably Not OK	Probably OK	Definitely OK
21. Is it OK for kids my age to kiss on the mouth with someone they really like?	1	2	3	4
22. Is it OK for kids my age to kiss on the mouth with several different people?	1	2	3	4
23. Is it OK for kids my age to have a boyfriend/girlfriend?	1	2	3	4
24. Is it OK for kids my age to spend time alone with a boy or girl they really like?	1	2	3	4
25. Is it OK for kids my age to go on dates?	1	2	3	4
26. Is it OK for me to have boyfriend or girlfriend now?	1	2	3	4

WHAT ARE YOUR REASONS?

Here are some reasons for NOT kissing someone you like on the mouth, and some reasons for kissing on the mouth. Which of these reasons YOU would choose for NOT kissing on the mouth at your age. Which of these reasons WOULD YOU choose for kissing on the mouth at your age?

27. I would **not** let a boy/girl kiss me on the mouth because I'm too young.

    A. Definitely true for me
    B. Maybe true for me
    C. Definitely not true for me

28. I would **not** let a boy/girl kiss me on the mouth at my age because I think it is gross.

    A. Definitely true for me
    B. Maybe true for me
    C. Definitely not true for me

29. I would **not** let a boy/girl kiss me on the mouth at my age because I would feel guilty afterwards.

    A. Definitely true for me
    B. Maybe true for me
    C. Definitely not true for me

31. I **would** kiss a boy or girl I like on the mouth now to be more popular.

    A. Definitely true for me
    B. Maybe true for me
    C. Definitely not true for me

32. Within the next year, I **would** like to kiss on the mouth with a boy or girl I really like?

    A. Definitely true for me
    B. Maybe true for me
    C. Definitely not true for me

33. I **would** kiss a boy or girl I like on the mouth now because my friends are doing so.

    A. Definitely true for me
    B. Maybe true for me
    C. Definitely not true for me

30. I would **not** let a boy/girl kiss me on the mouth at my age because my parents would be angry.

A. Definitely true for me
B. Maybe true for me
C. Definitely not true for me

34. I **would** kiss a boy or girl I like on the mouth now to see what it feels like.

A. Definitely true for me
B. Maybe true for me
C. Definitely not true for me

YOUR BELIEFS

35. I **believe** that girls are more popular if they have a boyfriend.

A. Definitely true
B. True
C. Maybe true
D. Not true
E. Definitely not true

36. I **believe** that boys are more popular if they have a girlfriend.

A. Definitely true
B. True
C. Maybe true
D. Not true
E. Definitely not true

37. **I believe** that having a boyfriend or girlfriend is okay because everyone else my age does.

A. Definitely true
B. True
C. Maybe true
D. Not true
E. Definitely not true

38. I **believe** that kids my age should wait to have a boyfriend or girlfriend.

A. Definitely true
B. True
C. Maybe true
D. Not true
E. Definitely not true

39. I **believe** kids my age should wait until they are older to kiss on the mouth with a boy or girl they really like.

A. Definitely true
B. True
C. Maybe true
D. Not true
E. Definitely not true

QUESTIONS ABOUT YOU AND YOUR FAMILY

40. How old are you?

    A. 9 years old or younger
    B. 10 years
    C. 11 years old
    D. 12 years old
    E. 13 years old or older

41. Which are you?
    A. Boy
    B. Girl

42. Mark the group(s) that best describes YOU. (Mark all that apply)

    A. Hispanic/Latino/Mexican
    B. Black/African American
    C. Asian or Pacific Islander
    D. Native American/Alaskan Native
    E. White
    F. Other

43. Which best describes whom you live with most of the time?

    A. Mother and father
    B. Mother only
    C. Father only
    D. Mother and other relatives
    E. Father and other relatives
    F. Grandparents
    G. Father and stepmother
    H. Mother and stepfather
    I. Other

44. Do you talk with your parent(s) about what kind of work you will do when you become an adult?
    A. Often
    B. Sometimes
    C. Rarely/not often
    D. Never or hardly ever
    E. I don't live with my parents

45. When you go out after supper or on weekends, do your parents know where you are going?
    A. Almost always
    B. Sometimes
    C. Hardly ever

46. What kind of grades do you usually get in school?

    A. Mostly A's
    B. Mostly A's and B's
    C. Mostly B's
    D. Mostly B's and C's
    E. Mostly C's
    F. Mostly C's and D's
    G. Mostly D's
    H. Mostly D's and F's

47. How far do you think you will go in school?

    A. Won't finish high school
    B. Will graduate from high school
    C. Will go to trade, technical, or vocational school after high school
    D. Will attend college but probably won't complete four years
    E. Will graduate from a four year college

48. How frequently do you have questions about having a boyfriend/girlfriend?

    A. Often (once or more per week)
    B. Sometimes (once or twice per month)
    C. Never or hardly ever

49. When you go out after supper or on weekends, do your parents set curfews (tell you when you must get home)?

    A. Almost always
    B. Sometimes
    C. Hardly ever

50. When you go out after supper or on weekends, do your parents know who you are going out with?

    A. Almost always
    B. Sometimes
    C. Hardly ever

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VITA

Lisa Margot Walker was born in Kingston, Jamaica, on December 8, 1964. She was later adopted by Millicent Innis. After completing her work at St Mary' High School, St Mary, Jamaica, in 1982, she entered Norwalk Community College, Norwalk Connecticut. During the following years she was employed as a teacher and counselor for children from pre-school to high school age. In 1994 she received the Bachelor of Arts in Psychology from Rhode Island College, Rhode Island, and a Master of Arts degree in 1996. In September 2000 she entered the graduate school at the University of Texas at Austin.

Lisa is published and has presented at numerous professional conferences. She has also served as an Instructor, a Teaching Assistant as well as a Research Associate at the University of Texas at Austin

Permanent Address: 2209 Granger Lane, Cedar Park, TX 78613

This dissertation was typed by author.